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LECTURES ON ARCHITECTURE

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Edward M Barry

LECTURES

ON

ARCHITECTURE

DELIVERED AT

THE ROYAL ACADEMY

BY THE LATE

EDWARD M. BARRY, R.A.

PROFESSOR OF ARCHITECTURE FROM 1874 TO 1880

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EDITED (WITH INTRODUCTORY MEMOIR)

BY ALFRED BARRY, D.D.

With Portrait and Illustrations

LONDON

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PREFACE.

It is necessary to prefix to this volume a few words on the general idea and purpose of the lectures here published—a selection from those actually delivered by the author from the Architectural Chair of the Academy[1]—and on the form in which they are here presented to the public.

His belief was that, since these lectures are delivered not to architectural students only, but to all Art students of the Academy, they ought to be so far popular as to steer clear of architectural technicality and detail, and to deal with architecture chiefly in its relations to other branches of art, and to the requirements and interests of modern life. Under the influence of this conviction, he allowed himself some freedom of style, and not infrequent digressions to subjects of the day, breaking in on the formality of strictly technical treatment. As the lectures, moreover, were intended for students, young as yet in education and knowledge, he did not

[1] Besides the lectures here published, he gave, in 1874, a lecture on 'The Course of Architectural Practice since the building of St. Paul's;' in 1875, a lecture on the 'Master Builder,' recommended by some modern critics as the substitute for the 'Architect,' and two lectures on the 'Life and Works of Michael Angelo;' in 1876, two lectures on 'Pompeii;' in 1877, a lecture on 'Originality in Architecture;' in 1878, a lecture on the 'Italian Renaissance,' afterwards expanded in the lectures of 1879 (here published); and in 1879 a lecture on the 'Gothic Revival and Sir Gilbert Scott.'

think that they afforded a proper opportunity for original investigation and research, for advocacy of personal tastes and peculiar theories, or, indeed, for any of those topics, which can be appropriately introduced only to those who are already advanced in general knowledge, or are avowed disciples of a particular school. His idea, often expressed in these pages, was that his lectures should form merely an introduction, perhaps an incentive, to architectural study and interest, and that, by limiting themselves to this comparatively humble task, they would be most really useful. How far this idea was successfully carried out the reader must judge ; but these were certainly the principles on which, with considerable pains and thought, the lectures were composed.

In publishing I have ventured to disregard in some degree the order of delivery, in order to group the lectures now given to the world in two series—one dealing with general principles, the other with their embodiment in the actual history of architectural styles. For, in the delivery of courses of lectures in separate years, it is obvious that the arrangements made would naturally differ from those which suit the presentation of their substance as a whole.

It is needless to say that the lectures must appear at great disadvantage, without the corrections and improvements, which would certainly have been bestowed upon them by the author, and without the freedom of selection and alteration, which he only could rightly use. Although every page has been passed through careful revision, I have thought it right to confine myself to the omission of some passages which served only a temporary purpose, or which would have involved repetition, to some separation and reconstruction of para-

graphs, to the insertion throughout of marginal headings, and to such verbal corrections as appeared to be absolutely necessary.

Especially I have felt difficulty as to illustrations. The lectures, as delivered, were often profusely illustrated by drawings carefully and beautifully executed on a large scale. On the other hand, as they were to be published in the architectural newspapers, they were so drawn up that illustration was not absolutely necessary. Moreover, in most cases the drawings used were not original, but taken from published works. Under these circumstances it seemed best to confine the illustrations here given within the narrowest possible limits. The illustrations of Crewe Hall are taken from original drawings or photographs; for those illustrating the lectures on Italian, Gothic, and the Renaissance I have to express my obligations to Mr. Fergusson, who has allowed them to be reproduced from his well-known 'History of Architecture.'

A. B.

October 1881.

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INTRODUCTORY MEMOIR.

[It will be understood that this Memoir, being prefixed to a distinctly Architectural work, is designed to be merely a sketch of Mr. BARRY'S professional career, giving only such private details as are necessary to a full appreciation of it.]

INTRODUCTORY MEMOIR.

EDWARD MIDDLETON BARRY, the third son of Sir Charles Barry, was born in London on June 7th, 1830.

In his childhood and early boyhood he suffered from frequent ill-health and a general delicacy of constitution, which he afterwards appeared entirely to outgrow. They were passed in consequence in a rather quiet and solitary life; for he was obliged to live out of London, at Blackheath, which was then a country place, under careful and affectionate domestic charge, but necessarily separated from the other members of the family, and thrown much upon himself. Perhaps in consequence of this, while his early life showed from the first the germs of the main developments of his future character—not only in unusual general ability and special artistic promise, in much keenness of observation and a singular maturity of judgment, but also in characteristic truthfulness and generosity and strong power of affection—it was rather a serious and thoughtful childhood, with little sign of the geniality and humour, which were afterwards so conspicuous in him, and which readers of these Lectures will trace not unfrequently escaping from a grave control. Possibly for the same reason, he lost some educational advantages which he might otherwise have enjoyed. He was sent only to private schools—first at Blackheath, then at Walthamstow—good of their kind, but not likely to inspire or mould the character in any high degree; and he left school early—as he himself

thought, far too early—to prepare for the career, to which his tastes and powers seemed especially to call him. For a short time he studied at King's College, London; in 1848 he became a student in the Architectural Schools of the Royal Academy: and for a year he was a pupil in the office of Mr. Thomas H. Wyatt, for whom he always cherished much esteem and respect. But at an early age he took his place as his father's assistant; and that place he filled, with constantly increasing power of usefulness, till the sudden death of Sir Charles in 1860.

Before settling down to work, he spent some time in an architectural tour on the Continent. But here also he had not sufficient opportunity of making full use of the education of travel, in the general enlargement of mind, and in the thorough and extensive architectural study, which are of priceless value to any professional man before settling down to the routine of ordinary life, and which in his lectures he took opportunities of urging strongly upon the young architectural student. The exigencies of professional opportunity drew him back far too soon. In after-life he delighted in travel, and took every opportunity of using it, both for relaxation and for study. But the golden time of early manhood never recurs; and the insufficient use of that time was to him both a regret and a hindrance through his whole career.

His period of service under his father, of nearly ten years, was his chief architectural training. It greatly influenced the development of his professional tastes and principles. But perhaps its most important lesson was to lead him—in this respect following Sir Charles's own example—to refuse exclusive adherence to any one school, or exclusive devotion to any one style. Such independence of principle was, indeed, thoroughly con-

genial to his own nature; and, as is mostly to be observed in cases of what is called 'hereditary genius,' his artistic power took free and characteristic developments of its own, diverging in many points from the school in which he had been, and was being, trained. Like his father, he could learn much from others, but could never copy. He had always, even from early days, clear ideas of his own, formed rapidly and with singular definiteness, and held with great tenacity; so that, while in all works carried out under Sir Charles's direction, or in completion of designs cut short by his sudden death, he followed out implicitly the ideas under which they were conceived, yet in his own designs, while, of course, showing how much he had learnt, he often took an entirely new path. It happened, for example, that one of the most original and successful of his early works—St. Giles's Schools, in Endell Street—was designed and executed in spite of much adverse criticism and persuasion from his father. At this time, moreover, while he was working hard in his profession, he never felt (I think) that exclusive and absorbing devotion to it, and to it alone, which is to be read in every line of Sir Charles's life. From the first he showed a keen interest in many other subjects—literary, scientific, and political—which he continued to cherish through all his subsequent career, and which certainly conduced both to his own happiness and general culture, and to his popularity and power of sympathy with others. He began to be a great general reader, although, from the nature of the case, and perhaps from the habit of his mind, he could not go deeply into any other subjects than his own. He showed also—what he always retained—much interest and cleverness in mechanical design and contrivance. In fact, he seems to have

supplied for himself that union of general cultivation with more special professional study, which is, on the whole, the best education for any future. At this time, moreover, he had outgrown his early delicacy, and with it the gravity, which had overshadowed his childhood, and he could thoroughly enjoy both domestic and general society; he was able to throw himself into all the interests and amusements of life, in which he began to manifest great powers of fun and humour, and rather remarkable histrionic capacities, without at all dissipating his strength or neglecting his professional work. In fact, he was so little adapted to move only in one professional groove, and to hold other vocations in life cheap, that at times, under the sting of many disappointments in later days, he even used to doubt whether he had chosen his vocation in life rightly. But, although he could certainly have distinguished himself in other professions, I believe that this doubt was entirely unfounded. For he had certainly just that union of strong artistic taste with scientific and business capacities, which he has well described as belonging especially to an architect's career, and which could hardly have found so adequate a scope elsewhere.

His professional life may be considered as falling naturally into three periods: the first from 1855 to 1860, while he was still assistant to his father, though doing much independent work; the second from 1860 to 1870, the year in which, after ten years' service, he was summarily dismissed by Mr. Ayrton from all connection with the Palace of Westminster; the third from 1870 to 1880, the year of his death.

I. During the first of these periods he had, of course, to devote a great part of his time to work under his father's direction, chiefly on the completion of the

New Palace at Westminster (especially the Peers' Front, and the upper part of the Clock Tower and Victoria Tower), and on the design for the Halifax Town-hall. For these, however, he was not in any way responsible. Those who knew anything of Sir Charles, and of his method of working, will be aware how entirely, both in general design and detail, every part of his buildings was his own.

In 1855, however, he carried out his first independent work—the building of St. Saviour's Church, Haverstock Hill. The design was simple, and on no great scale: but it showed the care for ecclesiastical feeling and propriety, which always distinguished the designs—to his great regret, comparatively few—which he was called upon to make for churches.

After this beginning, several more important works followed in rapid succession. In 1856 he was appointed (after competition) to erect the Birmingham and Midland Institute, a portion of a larger design, which was carried out by the erection of the Free Public Library in 1861, from his drawings, but not under his personal superintendence. The design of the building was classical, with an engaged order; by necessity it was kept to plainness and simplicity, but it was generally recognised as successful, both in character and in plan. The next year (1857) he designed and carried out the new Grammar School at Leeds—a striking Gothic building, although curtailed of its full development by want of sufficient funds. The chapel, in harmony with the general design, but a separate building, was added in 1862—small, and necessarily simple, but showing a distinct advance upon his first ecclesiastical design.

In the same year he undertook his first large

work. After the destruction of Covent Garden Theatre by fire, he was entrusted with the difficult task of a rebuilding, which had to be completed in eight months, under constant pressure, and also under the necessity of considerable deference to managerial ideas on arrangement and decoration and supposed practical necessities. He had here his first experience of the difficulties which in his lectures he so feelingly described, as attaching peculiarly to the work of the architect, and standing out in marked contrast with the comparative freedom of other artists. The work was certainly a very laborious and anxious work for a young architect, to whom any failure would have been ruin; and after all, in spite of his usual sturdy resolution to hold his own as far as possible, was in some points far from being what his own unfettered choice would have produced. Still it was to him a great opportunity (although not to be compared with the great theatres of the Continent in scale or in costliness); he bestowed infinite pains and unwearied vigilance upon it, and took great pleasure in the work. His first considerations were efficiency, usefulness, and convenience, and, in working these out under the difficulties of the situation, he showed, as usual, much fertility of contrivance, introduced some novelties of construction, and succeeded in producing a building which, for practical convenience, good acoustic properties, and facilities for safe ingress and egress, is universally allowed to be one of the best existing. In the external design he was considerably hampered, and even in the internal decoration could only devote his energies to secure richness and harmony, without the vulgar tawdriness so often mistaken for splendour. The theatre opened on the appointed day without accident or failure

of any kind, although the workmen had hardly left it when the audience entered; and he had the pleasure of finding that the best authorities gave high credit to the work thus achieved under extraordinary difficulties, by a young man of twenty-eight. In the next year the Floral Hall adjoining the theatre was added, with the idea of serving at once as a place for floral exhibitions of a higher class than can be found under the arcades of the neighbouring market, and as a fine promenade for the frequenters of the theatre. But it has scarcely fulfilled these expectations, and now serves only as a convenient concert room for the occasional performances of the artistes of the theatre.

The next year (1858) he began work at Henham Hall for Lord Stradbroke, who continued at all times one of his best patrons and kindest friends. This work, begun on a small scale, went on at intervals for many years, and finally attained considerable dimensions. It was partly a work of addition and enlargement, both of the Hall itself and its gardens, partly a work of transformation (like those for which Sir Charles Barry was famous), by which a house, previously plain even to baldness, and imposing only by its size, was so changed, without alteration of its main walls and openings, as to present a striking and dignified architectural effect; while at every step enlargement of domestic convenience kept pace with this æsthetic improvement. Probably few of his works more thoroughly carried out his own constant teaching on the harmony of the requirements of simple usefulness with artistic dignity and beauty.

In 1859 he was invited by the present Bishop of Rochester, then vicar of St. Giles's, to erect the National Schools at the corner of Endell Street. This work

was, of course, on a much smaller scale; it was carried on under the usual difficulties as to cost, and perhaps more than usual difficulty as to space; and under the necessity of considering before all else the exigencies of practical working. In spite, or perhaps in consequence, of these conditions, he produced a Gothic building, which for originality both of plan and elevation, and for artistic excellence of design, was one of the best he ever erected, and which attracted more attention than any of his previous works. It deserves, indeed, special notice, both because the design departed greatly from the style of the school in which he had been trained, and because it shows how little smallness of scale and cost can prevent the exhibition of architectural talent.

Thus in the first period of his professional career, while still giving a large, perhaps the larger, part of his time, to the work under his father, he had, before reaching the age of thirty, done much for himself; and had shown to the world evidence not only of architectural skill and ability, but of a characteristic versatility of talent, achieving excellence in various styles, and of a mastery of the scientific and practical, as well as the artistic, elements of his profession. At the same time, while in some points showing himself a ready learner in his father's school, he made it perfectly clear that he was able to take an independent and original line of his own; and that he would not be content to inherit a distinguished name without doing something still further to adorn it. The whole period was full of energy and happiness in his work, with much done already, but with promise of far more to be done in the future.

II. By the year 1860—the year of the sudden

death of Sir Charles Barry—he had won for himself so distinguished a professional position, that, having been his father's assistant, and inheriting by his will his architectural drawings, he succeeded at once to the charge of the completion of what remained to be done at the New Palace of Westminster, and of the design for the Halifax Town-hall, which was the last work of Sir Charles.

In the former office there was at first little but work of detail to be done. But the Halifax Town-hall called at once for considerable care and labour. Much had been left only in general design; in some points almost in sketch; and the whole had therefore to be worked out in detail. Here he, of course, considered himself bound to carry out religiously all that was indicated in his father's drawings, allowing no modifications, except such as were found absolutely necessary in the execution of the work; and, although he had to give to it no small amount of thought and labour, he sought to 'efface himself' as much as possible, and to leave the whole essentially his father's work. It was completed, and opened by the Prince of Wales, in August 1863.

In the year 1861, to his great gratification, he was appointed an Associate of the Royal Academy—to the vacancy caused by the elevation of an Associate to supply his father's place in the ranks of the Academicians. It was a high honour for one still young, and only as yet at the outset of his professional career. As such he felt it; and, from that time to the day of his death, he took the greatest interest in the work of the Academy, and served it in various capacities with unwavering loyalty.

Early in the next year (March 29, 1862), his position being now assured, he married Lucy, daughter of

Thomas Kettlewell, Esq.; and so entered on that domestic life which he always prized at its true worth; although he still took as much pleasure as ever in society and public work, and found in his wife one whose constant anxiety it was to aid him in holding his place in both. They had three children, Lionel Edward, born April 7, 1863; Edgar Alfred, born October 3, 1864 (who died on February 4, 1867); and Hilda Lucy, born December 15, 1871.

With these new ties he continued to labour zealously and prosperously in his professional career.

In 1862 he was one of the nine architects selected for competition for the Albert Memorial, in which Sir Gilbert Scott was successful.

In the same year, and in consequence of the success of his Covent Garden design, he was appointed by the Government to erect an Opera House at Malta. The work was one of large scale and considerable magnificence; and the architect was left much more free to carry out his own ideas, without stress of time or interference, than in the earlier works, and to adapt, as far as possible, the ordinary arrangements of an Opera house to the special requirements of a southern climate.

Not long after this, the completion of the South-Eastern Railway and the establishment of the two Terminus Stations in central positions at Charing Cross and Cannon Street, gave opportunity for the erection of two large hotels. This work was put into his hands; the former hotel being designed entirely for the accommodation of travellers; the other, in great degree, for public meetings and entertainments. Both designs had this peculiarity, that the lower story had to be given up entirely to the railway offices, with the exception of the entrance hall and the restaurant of the hotel; so that

the whole ground floor was interposed between the main part of the hotel and the basement containing the offices. This peculiarity constituted a twofold difficulty—an artistic difficulty, in relation to the design of the elevation, and a practical difficulty in relation to convenience of domestic arrangement. But these difficulties, of course, served merely to stimulate invention and increase interest. He studied very carefully, both for himself and by inspection of the best examples, all that could secure convenience and comfort in working; and in the elevations—in which the two buildings have at once strong likeness and characteristic differences—his great object was to unite a breadth and force of effect with the multiplication of small parts essential to the purposes of hotel life. For this purpose the style of the French Renaissance appeared to him best adapted; and he used it accordingly in both, departing both from the strict Classicism and strict Gothicism of the rival schools.

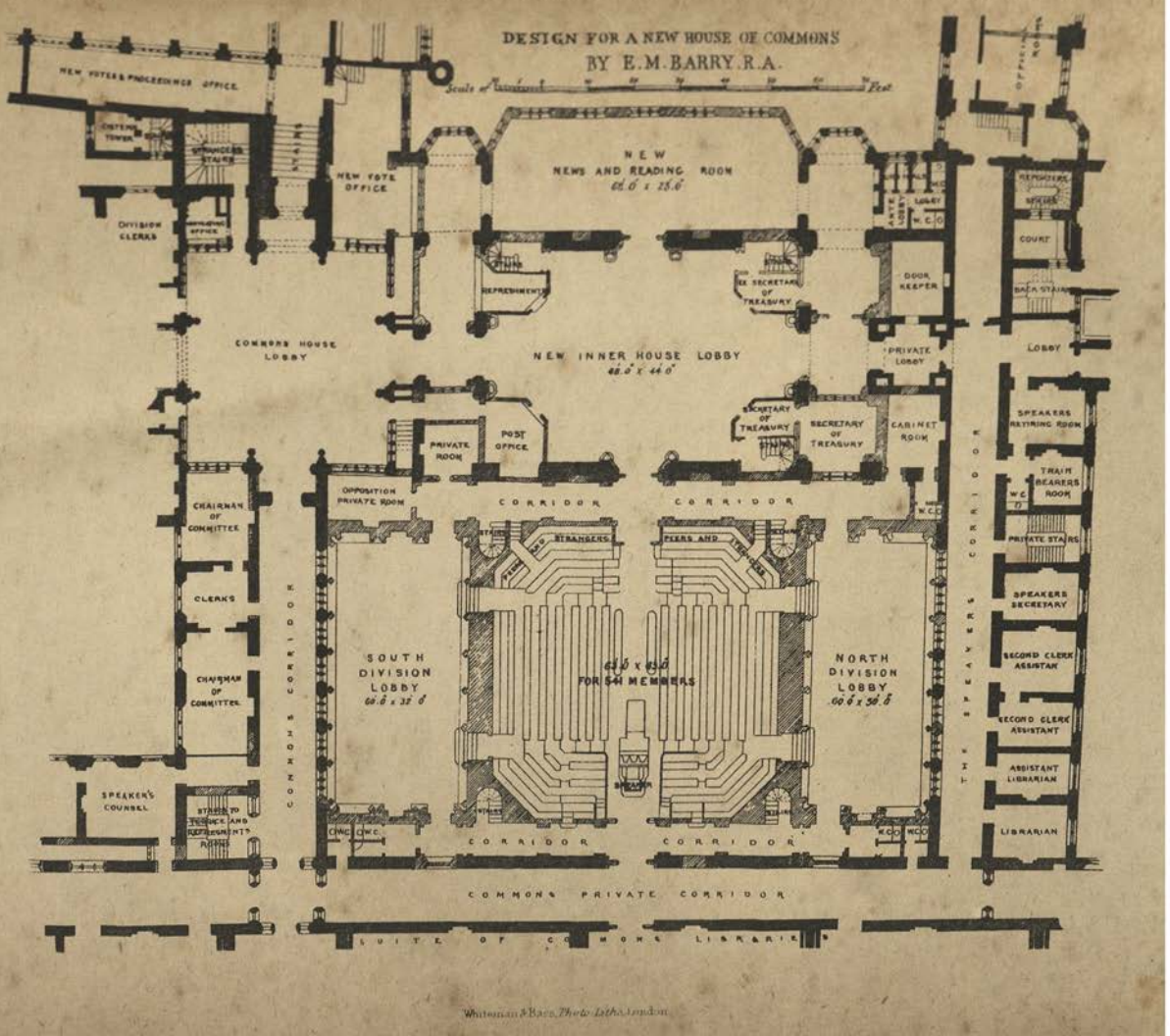
In connection with the Charing Cross Hotel, he contrived to win a singular victory for pure æstheticism over the stern utilitarianism which ordinarily rules in Boards of Railway Directors. He obtained permission to carry out in the square in front of the hotel a reproduction of the old Eleanor Cross at Charing, ruthlessly destroyed in 1646. It was a reproduction, not a mere restoration. For the representations of the old cross, still preserved, were but slight and inexact, showing that, while it bore a strong resemblance to the cross at Northampton, it had distinct peculiarities of its own. Accordingly, while preserving the character of the old crosses in general, he allowed himself considerable liberty of modification and enrichment; and, as was remarked at the time, attempted rather to work

in the spirit of the old architect than to copy the old work. The result is universally acknowledged as one of great beauty. Its position, as he was well aware, is unfavourable; it sadly wants more space and detachment from the great mass of building which overshadows it. But he had no choice in this respect; and he was well pleased to take advantage of the almost unprecedented liberality of the Board, without quarrelling with the nature of the site. The public agreed with him, and 'received the beautiful result with astonishment and thankfulness.'

About the same time he completed his hotel building, by additions and alterations (which were almost a rebuilding) of the Star and Garter Hotel, at Richmond, after a fire.

In the year 1865 his connection with the New Palace of Westminster began to yield some substantial fruit. New Palace Yard had remained an open space for some years. Since the houses on the south side of Bridge Street had been pulled down, it had been the hope of Sir Charles Barry that the whole might be made a great quadrangle of the same general style as the rest of the New Palace, with a prolongation of the façade from the angle of New Palace Yard to join St. Stephen's Porch; so as to give the accommodation for public offices then so constantly demanded, and even now not completely obtained. He had even left the west side of the Clock Tower unfinished, in the hope of this further addition to his great building. Now this idea was for a time definitely abandoned by the authorities.[1] It was resolved to finish the Clock Tower,

[1] The approaching removal of the Law Courts, and the promised demolition of the excrescence, which now conceals Westminster Hall on the west, may not improbably necessitate some revival of the original idea.



Whiteman & Bass, Photo-Lith. London.

to enclose New Palace Yard, and to provide an arcade along the eastern side of New Palace Yard, in connection with a subway under Bridge Street, so as to form a covered entrance for members of both Houses. The work was entrusted by Mr. Cowper-Temple to Mr. Barry. In carrying it out he had, of course, to be guided by the style of the existing façade; but close examination will show, under this general adherence, some marked peculiarities of detail, which show very careful design, and, as far as was possible, originality of treatment.

But the work in which he took the greatest delight, undertaken and carried out with the warm support of Mr. Cowper-Temple, but rather quietly, in a well-grounded fear of rigid economic utilitarianism and anti-ecclesiastical prejudice in the House of Commons, was the restoration and decoration of the crypt of St. Stephen's Chapel. This crypt, itself a thirteenth century chapel of great beauty, had been long disused and neglected. Before the fire the whole, or part, of it had been used as the Speaker's dining-room: subsequently it was treated by the contractors' workmen as a lumber-room; and Sir Charles Barry's proposal to restore it as the chapel of the New Palace had remained only as an idea. Now that idea was realised, but with a degree of beauty and splendour of which, in the days when it was first made, no one would have dreamed. Some considerable restoration of the stonework was found necessary; the floor was laid with marble and encaustic tiles, the windows filled with stained glass, and the whole of the interior highly decorated with colour and gilding. The work came upon the world as a surprise; few knew of the existence of the chapel, and even they had little idea of its beauty. The great defect, which

is irremediable, is the want of sufficient light. But the interior effect is singularly striking, and it is much to be desired that in some way it should be used regularly for worship, either by the inmates of the Palace, who are very numerous, or by some other congregation.

About the year 1869, and under the auspices of Mr. Layard, Mr. Barry was employed to complete the Queen's robing-room and the royal staircase, and to decorate the central hall. In connection with this last work some discussion arose as to the employment by Mr. Barry, on his own authority, of the Salviati Company to execute some mosaics in the hall. It happened that Mr. Layard had been formerly interested—on æsthetic rather than commercial considerations—in this Company; and, a question on this matter having been raised by a political opponent, it appeared that, as usual, the architect, having authority for the work, entrusted it to the manufacturer whom he thought best able to carry it out, without consulting the Board of Works. The matter was a trivial one, and only deserves notice as having been made by Mr. Ayrton, in 1870, one of the grounds for stating that official control over work and expenditure was imperfect.

During the time of his connection with the New Palace, Mr. Barry was frequently called upon to furnish designs for various improvements; as, for example, an extension of refreshment rooms, improvement of the acoustic properties of the House of Lords, and enlargement of the House of Commons. This last was far the most important. It ought to be known that the House was originally designed by Sir Charles Barry on a far larger scale; but was cut down, in deference to official advice, to a size convenient enough for the ordinary discharge of business in a comparatively thin House,

although insufficient for the accommodation of the numbers who attend on great occasions. The natural result has followed. In almost every new Parliament there have been grievous complaints of want of space for ordinary members, met by argument or postponement of the question on the part of those with whom rests the responsibility of the actual working of the House. At this time, however, the cry for more room was so urgent, that Mr. Barry was consulted as to some substantial remedy. He found, on examining the matter, that adequate enlargement was virtually impossible, and accordingly recommended the erection of a new House, occupying the area of one of the courts, to which the present House should serve as an inner lobby.

His design (of which, in view of the present revival of the question, it has been thought well to give a plan on the opposite page) was generally approved, and marks what will probably be found the only scheme likely to be effectual. But the work was a large and costly one, and at the time it was indefinitely postponed and came to nothing. Nor was anything done in the other cases by his hands, although, after 1870, a plan was proposed and carried out for the enlargement of the refreshment rooms, which was thought by some to have been suggested by his plan, with some modifications which were not improvements.

In the same year, 1866, he had entrusted to him the rebuilding of Crewe Hall—a work in which he took perhaps more pleasure than in any other which he was called upon to carry out; partly from the great intrinsic interest of the work itself, partly from the wise and generous confidence with which he was treated by Lord Crewe, and the full opportunity, which it was in this

case his unusual good fortune to enjoy, of carrying out his design to the greatest possible perfection. The old Hall, one of the famous Elizabethan houses of England, had been for the second time destroyed by fire. This rebuilding was not a mere restoration. Considerable additions were made. The central hall was carried to the whole height of the building, a new tower was built, new offices were added, and terraces on three sides of the house gave it greater elevation and dignity. But even in what was pure restoration (to use his own words), it was his object 'to work in a conservative spirit of careful and even reverent respect for all that was really good in the old work, without a slavish reproduction of questionable details, which were as obsolete as the manners of which they were the outward expression.' Accordingly, while the general character of the old was thoroughly preserved, yet all the resources of the higher artistic taste of our own times, in sculpture and painting, as well as in architectural detail, were drawn upon without reserve. Every detail was studied *con amore*, with a view to that complete harmony in the work of the sister arts which is always desired and seldom obtained ; and the result was a new Crewe Hall, which was yet the old Hall still, only expanded into a greater magnificence and artistic beauty, thoroughly compatible with a home-like feeling of comfort and convenience. But above all it was his delight to be allowed, in the spirit of the Crewe motto, *Quid retribuam Domino*, to lavish the greatest possible richness and beauty of decoration on the chapel, which had hitherto been bare and cold in comparison with the rest of the building. In this point, indeed, he was but carrying out Lord Crewe's own hearty desire, and the inaugural service in the restored chapel was made the central

feature of the festival which marked the reopening of the Hall in 1870.[1]

Up to the year 1867 his architectural career had thus been prosperous and successful. In that year he was called upon to enter the select competitions for the New Law Courts and the National Gallery. In both he achieved high distinction; but, by a strange and most unexpected course of events, that achievement brought with it the great disappointment, which from that time till the day of his death embittered in itself his whole professional life, and by its results checked the prosperous course of his architectural career. In giving here a brief summary of the chief unquestioned facts of the case, it is not desired to reopen a painful controversy, or to reflect injuriously on any of those who were mixed up in it; but simply to record a series of events, which play a principal part in the story of Mr. Barry's life, and illustrate very strikingly the conditions, under which architectural work has to be carried on when it is connected with the public service. It is not a little remarkable that, from wholly different causes, he should have seemed to inherit in this the unfortunate experience of his father. Of him also Sir Robert Peel's saying as to Sir Charles might have been repeated, *Cui sua mortifera est victoria.* There is only one point in the whole proceedings on which his biographer can dwell with satisfaction—that by the acknowledgment of all, under very great disappointment and provocation, no word ever fell from him of unfair statement or of personal bitterness.

Both of these competitions were select competitions, a proposal by Mr. Cavendish Bentinck to throw open

[1] Of Crewe Hall and its general characteristics a full account will be found in the VIIth Lecture of the Second Series. p. 318, &c.

the competition for the Law Courts having been discussed and rejected in the House of Commons early in 1866. In the competition for the National Gallery Mr. Barry's competitors were Messrs. Banks and Barry, Mr. Broderick, Mr. Somers Clarke, Mr. Cockerell, Mr. Owen Jones, Mr. James Murray, Mr. Pearson, Mr. Street, and Mr. (afterwards Sir) Digby Wyatt. In the competition for the Law Courts, Mr. Abraham, Mr. Brandon, Mr. Burges, Mr. Deane, Mr. Gosling, Mr. Lockwood, Mr. (afterwards Sir Gilbert) Scott, Mr. Seddon, Mr. Street, and Mr. Waterhouse. Both competitions were going on at nearly the same time; but only Mr. Barry and Mr. Street were named for both.

The award in the case of the National Gallery was first given on March 29, 1867. The judges appointed were Lord Hardinge, Lord Eldon, Mr. Beresford Hope (then president of the Institute of Architects), Mr. (afterwards Sir W.) Tite, Mr. W. Russell (trustee of the National Gallery), Mr. Boxall (director of the National Gallery), Mr. Brandon, Mr. Gambier Parry, and Mr. Redgrave, Inspector-general of the Science and Art Department. Their report, unanimously passed, declared that, after examining all the designs, and comparing them with the instructions issued, they 'acknowledged the architectural skill shown by the competitors,' but 'after full and mature deliberation' they felt 'bound to say that they were not prepared to recommend any individual design for adoption.' 'At the same time,' they added, 'we feel it due to the competitors to point to the design of a new gallery by Mr. Edward Barry, and to that for the adaptation of the present gallery by Mr. James Murray, as exhibiting the greatest amount of architectural merit.' It appears.

from a speech of Mr. Beresford Hope in the House of Commons shortly after the award, that the judges did not impute blame to the competitors; they considered that the competition designs had necessarily suffered from the difficulties of site and the incompleteness of the instructions issued, which were described as 'singularly vague'; and they proceeded accordingly in their report to lay down certain further conditions, under which they recommended that the new gallery should be erected. There arose the usual question whether the Government had given any formal obligation to employ any of the competing architects. But it was contended by the competitors, and substantially agreed on all hands, that this had been the understanding under which the competition took place; and as the erection of a new building was decided upon, in preference to a reconstruction of the old building, Mr. Barry might naturally expect that the work would be entrusted to him, with the usual liberty to modify his design so far as he might think it necessary or expedient so to do. His design was a classical one, with one great central dome, and other smaller side domes, acknowledged on all hands as a striking and stately design enough—'exceedingly able' (said the 'Times') and one of 'the most scholarly in the gallery,' and though liable to the charge of an imitation or adaptation of St. Paul's, yet in no sense 'a slavish imitation of Wren,' and having a 'vigour in design which deserves all praise.' In execution it would no doubt have been modified; certainly it would have been more thoroughly studied and worked out, than was possible in limited time and under the pressure of two contemporaneous competitions. The whole question was, however, postponed by Lord John Manners (who had

since become First Commissioner of Works) till the ground required should come into the possession of the Government. At the same time he declared against a fresh competition, and hoped without it 'to obtain eventually a building worthy of its purpose and entirely satisfactory to the country.'

Before any result from this award could take place, the judges in the other competition announced their decision. These were, Sir A. Cockburn, the Lord Chief Justice; Sir R. Palmer (now Lord Selborne), the Attorney-General; Mr. Gladstone, Chancellor of the Exchequer; Sir W. Sterling-Maxwell; and Mr. W. Cowper (now Lord Mount-Temple), First Commissioner of Works. They had the professional aid of Messrs. Shaw and Pownall, first as advisers, and afterwards as additional judges. The instructions to the competitors distinctly provided that 'the chief points to be kept constantly in view, and to be treated as superseding, in case of conflict, all considerations of architectural effect, are the accommodation to be provided and the arrangements to be adopted.' The complexity of the requirements, and consequently of the necessary plans, was acknowledged as extraordinary; and the judges accordingly thought it well to request general reports on the competing plans from Messrs. Shaw and Pownall, and from a Committee of the Bar and Solicitors, and special reports from the judges and officials of each department, in respect of the department with which they were immediately concerned. These committees, however, had no independent power or responsibility, and their reports were merely intended to guide the decision of the judges. Messrs. Shaw and Pownall reported on the general arrangements and on those of the courts and offices. Their report gave forty-one points

in favour of Mr. Barry, twenty-five in favour of Sir G. Scott, and three in favour of Mr. Street. The reports of the committees were far less favourable to Mr. Barry's design. In some points they preferred his design, in some Mr. Street's, in others the designs of other competitors. On the whole, the Committee of the Barristers and Solicitors appears to have inclined to the design of Mr. Waterhouse.

Having all these data before them, and possibly being somewhat embarrassed by the multitude of advisers called to their aid, the judges of design, who alone had the final authority and responsibility of selection, came to the following award: 'The judges are of opinion that the design of Mr. Barry is best in regard to plan and distribution of the interior, and the design of Mr. Street is best in merit as an architectural composition; and they recommend that an offer be made to these two architects to act conjointly in the preparation of the final plan to be executed.'

This offer both Mr. Barry and Mr. Street agreed to accept. Mr. Street accepted it unreservedly, in a letter to Lord Derby (January 20, 1868), pointing out that the 'course of employing two architects had been lately proposed by the "Times";' that 'among the competitors, two at least were in partnership with other architects;' that the commission originally 'proposed to obtain floor plans from one architect, and afterwards to obtain architectural elevation by competition from another.' He went on to urge forcibly that the Treasury was bound to accept and act on the award of the judges; and concluded with a declaration that neither he nor Mr. Barry 'saw any difficulty about working together harmoniously in the execution of the award.' Mr. Barry was naturally less emphatic. He declared,

'I am willing to work with Mr. Street, if the Government consider that course the best for the public service; but I cannot, in justice to myself, limit my claims to our joint employment.' Similarly on another occasion he said that he 'had never insisted on the joint employment of Mr. Street and himself.' For he held —what many impartial judges have confirmed—that, since the instructions expressly declared excellence of plan to be the first consideration, and architectural effect only the second, and since the judges had pronounced unreservedly that his design stood first in excellence of plan, the award on their own premisses should have concluded in his favour. He considered, therefore, that, in accepting the offer of joint employment, he was yielding a right which he might have fairly and successfully maintained. But he did this cheerfully; he had a high personal esteem for Mr. Street, and a sincere admiration for his abilities; he believed that they could work together successfully, and he had no desire to insist rigidly on the rights which he nevertheless conceived himself to possess. Certainly, he never conceived it possible that, if the arrangement proposed by the judges fell to the ground, his superior right to a sole appointment could be for a moment doubted.

But a question arose whether this double award of the judges was a valid award. Some of the competitors very naturally urged that they had expected to have to compete with the ability of each of their rivals separately, and not with the combined excellences of two. This view was originally taken by Sir Gilbert Scott, who had acted as chairman of the competitors; but he afterwards withdrew all opposition, in deference to the repeated award of the judges, expressed 'earnest desire' that the award should be acted upon, and generously

added that there 'was room for two architects in the great work,' and that 'the talents of the two architects concerned are such as would among the members of the architectural profession give confidence in the result.' This question, however, having been raised, was referred to the Attorney-General; he pronounced the award technically invalid, and the Treasury accordingly applied once more to the judges of design, stating the difficulty which had arisen, and asking for a sole award. On this the judges, having reconsidered the whole question, with all the new light thrown upon it, returned the following emphatic answer :—

We regret that we could not agree to make such an award as was contemplated in the Treasury Minute and the instructions to the architects: but having arrived at the conclusion that the design of Mr. Barry is best as to plan, and that of Mr. Street as to elevation, we considered that the best course of procedure that we could adopt was to tender our recommendation that these two architects . . . should be entrusted conjointly with the preparation of the final design. . . . On reviewing our proceedings, no course appears to have been open to us better than that which we have taken; but whether we judged rightly or not, it is clear that we have now no power to render further assistance in this matter.

With regard to Mr. Gardiner's report on the measurement and estimates of the competitors, I may observe that it does not contain anything to affect our present decision.

W. Cowper.

Under these circumstances it would have appeared, as indeed it did appear to many who considered the question, that only two courses were open to the Government. They might have set aside legal and technical difficulties, so as frankly to accept the award of the judges, and to call upon the two architects who had declared themselves willing and able to work it out

to combine their energies in the public service. If, on experience, it was found difficult or impossible to secure harmonious co-operation, it was obvious that the supreme power of direction or dismissal always lay in the hands of the Government. But if this course appeared to them questionable in respect either of legality or of expediency, then, unless they set the award of the judges altogether aside, they were, it would appear, clearly bound to act in the spirit of the instructions which regulated both the competition and the award. These had expressly declared that excellence of plan was of primary importance, and was to supersede, in case of conflict, all other architectural considerations. The conflict had now arisen; the judges had pronounced that the excellence of plan, beforehand declared to be of supreme importance, was with Mr. Barry. Most naturally, therefore, he conceived that the erection of the building ought in equity to have been confided to him, and that he should have been called upon to reconsider and reconstruct his elevation, and at the same time so to modify his plans as to avoid such defects as had been declared by good authorities to be drawbacks on their acknowledged general excellence.

But the Government (Lord Derby's Government) did neither of these things. Without giving publicly any reasons for the course they adopted, and without any communication whatever with Mr. Barry, they passed him over altogether, and appointed Mr. Street sole architect. The appointment was made and accepted before he knew (except, perhaps, by rumour) that it was contemplated, and, in fact, he was actually left to learn it through the columns of the public press. No notice was taken of the contention, so emphatically put forward by Mr. Street, and accepted loyally, though

under protest, by himself, that the award of the judges ought to be considered as final.

It is needless to say that this resolution of the Government, on which no opportunity of remonstrance was given, was received by Mr. Barry with infinite astonishment and dismay. He never for a moment thought of disparaging the skill and artistic ability of his competitor; on the contrary, he more than once publicly expressed his opinion that Mr. Street was fully adequate to the task imposed upon him, and that under his auspices a building worthy of the occasion would be produced. But he felt that a great wrong had been inflicted on him, for which nothing could compensate; and that the public faith had been, to say the least, brought into serious question, by the deliberate setting aside of an engagement which to ordinary minds would have appeared absolutely binding. He addressed a letter to Mr. Sclater Booth (on June 8, 1868), then Secretary to the Treasury, stating his case in forcible but temperate language, and concluding as follows: 'I have every confidence in Mr. Street's ability to design and carry into effect a building worthy of the nation; but I cannot acquiesce in the justice of the course proposed to be adopted, as I consider it directly at variance with the letter and spirit of the conditions, on the faith of which I, in common with the other competitors, agreed to devote time and attention to the work. . . . I have a right to ask, very respectfully, but most urgently, that the Government should abide by their engagement, formally recorded in a Treasury Minute, that the award of the judges should be final.'

It appears (from a published letter to the 'Times' of August 1) that to this letter, and to another of somewhat later date, no answer except a formal acknow-

ledgment was received; probably it was easier for the Government to announce their resolution than to defend it by reasons. On June 20 Lord Salisbury brought the question before the House of Lords by a clear and able statement of the facts of the case, concluding by asking whether 'it was true that the Government had rejected the design which was recommended by the professional judges and the judges of design as the best for plan and internal arrangement, and had adopted the plan which was recommended by elevation only? and further whether the competitors were instructed that utility and convenient arrangement were to be preferred to architectural effect?' Two days later Mr. Lowe presented to the House of Commons a petition from Mr. Barry, again stating his grievance, and asking 'for a Select Committee to enquire into the circumstances of the case, and to adopt such measures as may be necessary to secure a decision which shall be consistent with the interests of the public service, in accordance with the conditions of the competition, and just and equitable to your petitioner and to the competing architects who have furnished designs to the Government, in full confidence of such a result; or that such other relief shall be afforded to your petitioner as your honourable House shall see fit.' This petition was supported by Mr. Lowe, in a debate on an independent motion for a Select Committee by Mr. Goldsmid. In the hands of such advocates as Lord Salisbury and Mr. Lowe, it is needless to state that Mr. Barry's strong case was strongly stated, and in the House of Lords supported by Lord Cranworth (who, as Lord Chancellor, had signed the conditions of competition), Lord Harrowby, and Lord Carnarvon.

It is hardly likely that any Government could have

set such representations absolutely aside. But a curious device presented itself to some ingenious mind, by which the determination already taken to employ Mr. Street might be excused, if it could not be justified, and an apparent 'relief' (such as the petition desired) be given to Mr. Barry. The Lord Chancellor announced that, having to choose architects both for the Law Courts and the National Gallery, they had assigned the former work to Mr. Street and the latter to Mr. Barry; and it was subsequently added that the new buildings at South Kensington would be entrusted to Mr. Waterhouse. This apparent compromise, giving something 'all round' to those whose claims had been advocated, was well adapted to disarm immediate opposition, and to present to a perplexed Legislature a tolerable way out of a hopeless embarrassment. It succeeded accordingly. In the House of Lords 'the subject dropped.' In the House of Commons (in a thin House), the motion for a Select Committee was rejected by 90 to 45. Mr. Waterhouse probably saw no reason to complain; for though his design had received high professional approval, he had no authoritative award in his favour, and he now found entrusted to him the erection of a building of great importance, in which he has subsequently achieved a distinguished success. But it is difficult to defend on any principles of equity the effect of this apparent compromise on Mr. Barry's position. His claim, whatever it was, to employment at the National Gallery was necessarily a wholly independent claim, won in a competition in which Mr. Street's design was not even mentioned. It had no bearing whatever on the case of the Law Courts; it could have afforded him no compensation for any wrong which he might have sustained therein, even if it had been—what

it was not—a work of anything like commensurate magnitude. The effect was that, by affording an excuse for setting aside his strong claims to the charge of a work which was to be one of the greatest of this century, it actually (as he complained) placed him in a worse position than if he had gained no success at all in the former competition. His 'double success' (as was publicly said) was thus practically 'turned into failure'; not merely was a serious injury inflicted upon him, but (as Mr. Lowe declared) a course was taken which 'tended to put an end to the system of architectural competition.' As soon as the superficial plausibility, which at first sight attaches to all compromises, came to be more carefully scrutinised, this was clearly seen, as the comments of the press, professional and non-professional, abundantly show. It was not yet too late to remedy the wrong done. 'The battle of the sites' was soon after begun, by proposals to exchange the Carey Street site for some other on or near the Embankment, and it raged so furiously as to stop all proceeding with the work for some years. Even so late as March 26, 1872, the 'Times,' in an able review of two pamphlets by Mr. Street and Mr. Barry, gave an excellent summary of the whole controversy, and concluded thus: 'By what we, and every one who makes himself clearly acquainted with the facts of the case, must judge to be unfair and unwarrantable treatment, this double success (of Mr. Barry) has been turned into a double failure. . . . It would be a just act, and a way out of a difficulty already deplorable and soon irremediable, if the Government should, under Parliamentary sanction, or of their own accord, now ask Mr. Street and Mr. Barry to join hands in this great work.' But formal official acts are not easily undone, even by succeeding and

antagonistic Governments. *Fieri non debuit; factum valet*, is the motto in most cases of public policy; and it is nearly as hard for a professional man to contend with the Government as for a philosopher to argue with the master of ten legions. Having once pronounced their formal decision, they had only to maintain a masterly inactivity, turning a deaf ear to all argument and remonstrance. In a letter addressed to the 'Times' (of August 1, 1868), after complaining that his letters to the Government were left unanswered, and after putting before the world a plain statement of the case, he concluded thus:—

> I had hoped that the Government would have hesitated to pursue a course which has turned my success in the competition into a serious grievance, or, at least, would have furnished me with some satisfactory explanation of the reasons which have induced them to inflict upon me so great an injury. As I have been disappointed in this expectation, it now becomes my duty, on public and private grounds, to protest formally and publicly against my exclusion from the work, as being at variance with the letter and spirit of the conditions of the competition and the decision of the Judges, and as leaving undischarged the obligations which the Government have incurred towards me by such conditions and decision, on the faith of the strict and honourable performance of which obligations they have obtained from me my professional services, and now possess my designs.

With this formal protest he had to content himself, and, without any true compensation whatever, submit, not only to bitter disappointment in the loss of an opportunity, such as rarely falls to the lot of architects, but to what he conceived to be a wrong, wholly undeserved by himself, and never justified before the world by any adequate reason.

But the history is not yet complete: and, for the sake of coherency, I shall disregard here the order

of time, and pursue the story of the National Gallery. On June 16, 1868, he received an official letter stating that he was appointed architect of the new National Gallery; and on June 26, he was informed by the Secretary to the Board of Works, 'to prevent all future misunderstanding,' that it was 'on a consideration of all the circumstances attending the competitions for the National Gallery and the Law Courts, that this appointment took place;' and that, 'as soon as the ground was acquired, and designs approved of, it was intended to commence the building.' In the justice of connecting together two wholly independent works, and in considering as compensation for claims set aside in the one an appointment fairly won in the other, he was, as has been said, unable to agree. But he comforted himself with the prospect of undertaking, on 'the finest site in Europe,' a national work on a great, though inferior, scale, visited all the chief galleries in Europe, remodelled his design, and prepared to do his best in the public service. On November 6, 1869, after the accession of Mr. Gladstone's Government to power, he submitted to the First Commissioner of Works (Mr. Ayrton) a complete design, with an elaborate report, giving in detail the wall-space provided, the provisions for lighting, and other particulars of plan; and advising as to the proposed acquisition of fresh ground for an enlarged site. Of this report and design no notice whatever appears to have been taken. In the course of 1870, some additional ground was acquired, and, in deference to urgent demands from the trustees, Mr. Barry was directed to prepare plans for some new galleries, which were carried out under his superintendence, and opened to the public in 1876. But these formed only a fragment of his design; they were only a patch on

the old building, with no opportunity for architectural effect; and even when complete, they did not fully answer the needs, stated by the trustees in 1867, and increased subsequently by the purchase of new pictures. The design for the new building was still before the Board of Works; and the promise of 1868 still unfulfilled.

In 1876 Mr. Barry was forced, in a letter to the Secretary of the Board, to call their attention to the fact that, from 1869 to 1876, 'no communication whatever had been sent to him relating to the same,' or any remuneration received by him for his design. In this letter he entered forcibly, but temperately, into the whole case, and urged that the course pursued was both unfair and injurious to him in many ways. To this letter it appears unquestionable that no reply whatever was vouchsafed. In March 1877 he again wrote, on seeing an announcement of the First Commissioner in Parliament, that 'the Government had abandoned the intention of proceeding any further at present in the works for the National Gallery'—an announcement made without any official communication to him. In this letter, again, he represented the grievance inflicted upon him, and pressed for some compensation; adding at the same time, in words of deep, natural disappointment, 'It is obvious, however, that no arrangement can compensate me for the non-fulfilment of the expectations held out at the time of the competitions, which formed my sole inducement to submit designs for the two most important public buildings of the time—to have his name connected with which (apart from any pecuniary advantage) would naturally be an object of honourable ambition to any architect.' It might have been thought difficult to leave such a letter unanswered,

but for more than two years no reply whatever was given to it. At last, however, in July 1879, a conviction of the hardship inflicted upon him appears to have been felt by the new (Conservative) Government, and a sum of 5,000*l.* was awarded to him as a remuneration for work done in preparation of the general designs for the new building, and as some compensation for non-employment. The grant was accompanied by a strong testimony to his high professional merits, as entitling him to full confidence from the Treasury and the Board of Works. How utterly inadequate such compensation was, and how bitterly he felt the departure from an agreement avowedly made to compensate him for the hardship, which had been inflicted on him in the matter of the Law Courts, it is needless to say. In his letter of acknowledgment, while thanking the Government for their kind and generous appreciation of his services, he adds :—

> The prospect (or, as I consider it, the promise) of being permitted to connect my name—as my father had done before me—with great public works of national importance and utility, in the event of a favourable decision by the Judges of Designs in the two great competitions, to which I was invited by Her Majesty's Government, constituted my sole inducement to enter those competitions. It is some satisfaction to me to find that their Lordships have now placed on record their opinion that under the circumstances that have occurred I might have reasonably hoped for such public employment, and have further stated that the disappointment which I have experienced in this respect has not been caused by any demerits of my own.

It was indeed vaguely intimated that, in case of the completion of the design, it should be entrusted to him. But even at the time the intimation carried with it little substantial hope; and in less than six months

from the time when it was made, his sudden death cut short all earthly designs and expectations. The work (as is universally acknowledged) must some day be done; but it will have to be done by another hand. Neither in Carey Street nor in Trafalgar Square will there be any visible memorial of the man who gained the highest distinction in competition for architectural employment in both.

Such is a plain statement, founded on unquestionable facts and documents, of an experience which will be to those unacquainted with the case almost incredible, and which is, it may be hoped, wholly exceptional in the history even of architectural competitions. That, by the controversies which it excited, it seriously injured Mr. Barry's professional career, and that by the pressure of constant disappointment and sense of wrong, it preyed on his health and spirits, and shortened his life, there is unfortunately no doubt whatever. But it has more than a biographical interest. For it shows how public faith may be imperilled, and injustice done to individuals, when the exigencies of the public service are supposed to intervene, by men of high honour and integrity, who would in their private capacity shrink from even the appearance of inequitable or ungenerous dealing. It is not surprising that from this time forward he declined all invitations to enter into Architectural Competition; and dwelt strongly, as in some of the lectures in this volume (especially Lecture VIII. of First Series), on the radical viciousness of principle involved in the whole system of competition, as now generally administered.

Unfortunately during this period, Mr. Barry had been brought in a different way into painful relations with a member of the Liberal Government. Up to the

year 1870 he had been entrusted with the general architectural care and superintendence of the New Palace at Westminster, and he had reason to believe that this function had been discharged to the full satisfaction of the Office of Works and of the two Houses. Under Mr. Cowper Temple, Lord John Manners, and Mr. Layard he had carried out various works in which he took a great and natural pleasure. That they were not of great magnitude is evident from the fact stated by Mr. Cowper Temple, that his professional remuneration did not average 300*l.* a year; but they were works requiring considerable artistic skill, and had for him a peculiar interest. Now, however, Mr. Layard was succeeded by Mr. Ayrton, who had avowed himself above all else an advocate of economy and rigid official control, had taken opportunity to glory publicly in his ignorance of 'what is called art,' and conceived his official duty to consist largely in guarding the public purse against insidious attacks made in the name of science and art. Suddenly, in January 1870, at the very time when he was feeling bitterly his treatment in respect of the Law Courts, Mr. Barry received the following curt letter from the Board of Works:—

SIR,—I am directed by the First Commissioner to inform you that, in consequence of various arrangements now being made for the conduct of works under this Office, the New Palace of Westminster will, from the 31st of March next, be placed entirely in charge of the officers of this department; and that the estimates for that service for the ensuing year will therefore be prepared on their responsibility.

I am further to inform you that the First Commissioner will be obliged to you to have all the contract plans and drawings of the Houses of Parliament, and all other papers necessary for affording a complete knowledge of the building and of the works carried on in connection therewith, arranged together and deposited in the office of the Clerk of the Works,

in order that they may, when required, be at once handed over to this Department.

I am, &c.,

GEORGE RUSSELL, *Secretary.*

This letter came upon Mr. Barry as a most painful surprise. This unceremonious dismissal from a post, which, although not an official appointment, had been held for ten years, without any complaint of the way in which its duties had been discharged—unaccompanied by a single word of thanks for services ungrudgingly rendered, or regret that considerations of public interest required a change of arrangements—was not only a disappointment of not unnatural expectations, but was calculated to injure him by the impression, which it, of course, produced, that some failure in his public duty in the way of unskilfulness or extravagance necessitated so abrupt a dismissal. Besides this, he felt it a slight to his profession that, contrary to almost universal precedent, 'one of our chief architectural monuments should be entrusted to the sole care of the officials of a department which is constituted avowedly without reference to artistic qualifications.' The demand, moreover, of the plans was one which, whether reasonable or unreasonable in itself, was contrary to ordinary professional practice, and which he could not concede without appearing to depart from the customs of the profession. Accordingly, he ventured to remonstrate on the first point on private and public grounds; and on the second, reserving the question of right, offered to give up to the Department all the drawings which had been made during the time of his own employment, and to allow tracings to be taken (on payment simply of the cost of labour) of such drawings as might be required from those left him by his father, which he stated that he con-

sidered as 'a sacred deposit.' A correspondence followed, conducted on Mr. Ayrton's part in that characteristically harsh and imperious tone which drew down upon him so much general unpopularity, declining to enter into any argument, and (not without a sarcastic reference to the expression used in respect of Sir Charles's bequest) referring the question of the drawings to legal decision. The Institute of British Architects took up Mr. Barry's cause warmly, and protested both against the entrusting great architectural buildings to non-architectural charge, and against the departure, in respect of the drawings, from what had been the uniform custom of the profession. It was, of course, understood on all hands that all such drawings as were necessary for the use of a building should be supplied. The public, however, generally rejected the professional view on the latter point, and some of its advocates used hard words about the 'trades union' character of the proceedings of the Institute. But no one doubted that Mr. Barry had been treated harshly and ungraciously in the matter, if not in the fact, of his dismissal. Mr. Cowper Temple generously took up his cause in the House of Commons, and went so far as to move a resolution—practically a vote of censure on the First Commissioner and the Government—that the step 'taken was uncalled for and of doubtful expediency.' But it was hardly possible that this should be carried. However unwise and unnecessary Mr. Ayrton's action might be, the Government had clearly a legal right to take it, and the plea for better official responsibility and control was at least a plausible one. Nor could the proverbial uncourteousness of Mr. Ayrton, and his contempt for art and artists, although hardly denied or excused by his supporters, be held to be sufficient

grounds for a formal vote of censure on the particular step taken. It was, however, a mark of the strong feeling of the House against this style of dealing with professional men of reputation, that the motion, though opposed with all the force of the Government, was only defeated by forty-three votes (152 against 109).

In this matter Mr. Barry, while feeling hardship, did not, as in the matter of the Law Courts, conceive that he had suffered wrong. But it was undoubtedly a considerable injury to him. Perhaps on the principle of the well-known *Odisse quem læseris*, he was regarded in official quarters with much disfavour, which may have had something to do with his treatment in respect of the National Gallery. In the world at large, moreover, any professional man who is much mixed up with controversy is looked upon with some suspicion and apprehension. It is fancied, without any examination of the facts, that the fault must somehow lie in great measure with him, and even strength and ability in his pleas for himself invest him with a rather formidable character, not likely to conduce to his professional employment.

These three years, 1868–1870, marked in some sense the turning-point of his life. His professional character and reputation, indeed, stood out unimpaired, perhaps higher than ever. But he felt that he had been deprived of a great architectural opportunity, to which, being now in the prime of life and full maturity of his powers, he believed that he could have risen, and of which he foresaw, only too truly, that it was never likely to recur. To the sense of disappointment was added the sense of wrong. At the opening of Crewe Hall in this very year, in dwelling upon 'the unvarying kindness and confidence' shown to him by its noble

owner, he could not help adding that he appreciated these all the more, because 'he had good reason to know that architects were not always so treated, particularly if it was their fate to be employed on public works.' The feeling did not, indeed, impair his professional energy and enterprise, or diminish the interest, which he had always taken, in general æsthetic and scientific progress. But it certainly told severely on a naturally sensitive disposition, singularly equitable and generous in dealing with others, and for that very reason keenly alive to anything which seemed like ungenerous or unjust treatment of himself. It was through this, rather than through pressure of work, that he used to say of himself that he was 'worn out before his time'; and no one who knew him could fail to trace that gradual weakening of health and constitution which led to his premature death.

III. The last ten years of his life were nevertheless years of unwearied professional activity.

To the years 1869–1873 belong most of his designs for private country houses, on which he always bestowed the greatest possible care, striving to realise in practice his own constant teaching, that practical utility and convenience are not hindered, but advanced, by care for artistic correctness and beauty. Of these the design for Sir E. Kay's house at Thorpe Abbots is an excellent specimen of the reconstruction of an old building, improving its convenience, increasing its accommodation, and giving it a wholly new character as to architectural effect. 'Shabden' (built for Mr. Cattley), 'Cobham Park' (built for Mr. Coombe), 'Wykehurst' (built for Mr. Huth), were new buildings, all of some considerable size and architectural dignity, although none of them rose to anything like grandeur of

scale. In all these designs, perhaps the most notable feature was that of which the new Crewe Hall is the finest specimen—the union of care for general design with a singularly minute attention to details, and of a constant attention to æsthetic effect with a most thorough conception of home comfort.

About the same time he was called upon to undertake the internal completion and decoration of the Fitzwilliam Museum at Cambridge, which had been left unfinished, until sufficient funds should have accumulated for its completion. The chief structural alteration was of the great staircase; the rest of the work consisted mainly in decoration. In work of this kind he took very great pleasure. It was thought by some that his taste inclined to some excess of splendour; but all was carefully studied to unite harmony and richness of general effect with delicacy and correctness of detail; and in the realisation of this idea, it was allowed by most critics that he achieved considerable success. While thus employed at Cambridge he was appointed to complete the Quadrangle at Downing College; but here he was trammelled by the necessity of carrying out a meagre and ineffective design, and little opportunity was given for architectural originality.

To the same period, 1871–1875, belongs the new Children's Hospital in Great Ormond Street. In design, like the Charing Cross and Cannon Street Hotels, it followed the style of the French Renaissance. But it was executed in cheaper material, of red and white brick, and the architect, accepting as a condition the paramount necessity of a strict economy in the expenditure of charitable funds, laboured with the greatest care, and with no inconsiderable success, to make every feature of artistic design subserve some distinct purpose

of usefulness, and to secure architectural effect, not by profuse ornament, but by careful study of proportion, variety, and force of design. The hospital itself, under the invaluable guidance of Dr. West, was constructed in all its parts in strict obedience to the requirements of sanitary science, practical usefulness, and the bright cheerfulness, essential especially to a children's hospital. To these considerations all possible care and study were given, and nothing was spared in expense which was needful to secure efficiency. But richness of adornment was confined to the chapel, and on this no shilling of the funds of the hospital was spent beyond what was necessary to erect the bare walls and roof. The rest was the work of private munificence, which, in the spirit of the old church-founders, lavished all its treasure in the effort to make the interior a gem of rich and chastened beauty; as a memorial to one who had passed away, as a gift for the highest benefit of the inmates of the hospital, and an offering for the glory of God. The chapel is small, and the decoration was therefore carefully adapted in scale to its dimension. To the architect as to the donor, the work was a labour of love, and the result one of singular beauty, in which every detail has its special meaning, and the whole is brought into a harmony both of idea and of artistic effect.

Not long after the Children's Hospital, the new galleries of the National Gallery were opened (in 1876). The work had, unfortunately, not been completed without some thwarting by Mr. Ayrton of the architect's desires, as, for example, in his refusal to allow the floors to be made absolutely fire-proof; and, when it was executed, and handed over to the officials of the gallery, they carried out the arrangements of the

pictures without the slightest deference to the architectural design. But to these drawbacks Mr. Barry was now but too well accustomed; and, these being excepted, he was left free to carry out an extensive work, more than doubling the old accommodation, and allowing the introduction of great improvements in arrangement; and the work, moreover, though giving no opportunity for external effect, left full scope for internal beauty both of proportion and of decoration. Of this he availed himself as far as possible, especially in the great Octagon Hall. Of the excellence of the result, so far as regards the essential points of spaciousness, light, and ventilation of the galleries, there was little or no question. But on the decoration there was diversity of criticism, involving, as the 'Times' truly said, 'the old question whether it is better to take the pictures and their frames as the key-note, and decorate up to that pitch, if that be possible to modern ornamental art, or to be content with the more humble style, which makes the interior of a gallery subdued and grave in its ornamentation, with a general neutral tint of colour as background.' Of these alternatives Mr. Barry unhesitatingly accepted the former, while at the same time he held that the decoration, though harmonised rather than contrasted with the brilliancy of the pictures, should be subordinated thereto, and maintained that, due allowance being made for the toning down of time and London atmosphere, his galleries, highly decorated as they were, nevertheless fulfilled this requirement.

Another example of his skill in decoration was supplied in the renovation of the interior of the Reform Club in 1878. At the time, some forty years ago, when the building was erected by Sir Charles Barry,

the need of economy, and perhaps the taste of the period, prevented the decoration from being thoroughly carried out, and admitted too much of imitation marble and wood as substitutes for the costlier realities. Now a larger opportunity was given; reality was in great degree allowed to replace imitation; and the decoration was worked out to a degree of richness and perfection unattainable at the earlier time. It is hardly necessary to say that Mr. Barry worked *con amore* at this embellishment of his father's work, and the result was, by common consent, highly approved, not only for its own intrinsic beauty, but for the striking effect which it gave to the fine lines and proportions of the building itself.

During the whole of this period he devoted much time and thought to the work of the Royal Academy. He became an Academician in 1869; in 1873 he was appointed to the Professorship of Architecture for five years, which, having been re-elected in 1879, he held up to the time of his death; and in 1874 he received from the Crown the appointment of Treasurer of the Academy. From the beginning of his connection with the Academy he took the warmest interest in its work, and that not merely in his own department of architecture. For, as his lectures repeatedly declare, he valued greatly the union in the Academy of the adherents of what should be sister arts, just as, on the other hand, he emphasized the relation of the architect to the more purely utilitarian and scientific work of the engineer. Though no academy, literary or artistic, in England can vie with the imperial supremacy of the Academy of France, still he felt that an important power of leadership might well emanate from Burlington House, and that all who enjoyed the high professional

dignity of the Academy should do all that could be done to add to it the higher dignity of public service. In his capacities as Academician, Professor, and Treasurer, he tried, as far as possible, to carry out his theory into practice. Of his work as Professor this volume will enable the world to judge. As a Member of Council he threw himself into all the interests of the Society, with his usual independence and energy. As Treasurer, succeeding Mr. Smirke, the architect of the New Burlington House, he placed his professional talent freely at the disposal of the Academy, carrying out several important improvements, especially in the entrance and great staircase, and took a leading part in all the deliberations of the Council. All this was not done without a good deal of labour and anxiety, and some of the collisions to which the work of all corporate bodies—perhaps not least artistic bodies—are liable. But it was throughout done most willingly, and in it, Sir Frederic Leighton has said, 'he showed an uprightness, a genial courtesy, and a dignity of self-control, which I have rarely seen surpassed.'

At the same time he took a full share in the work of the Institute of British Architects, in which he held the office of Vice-President, and he became an Associate, and for one year a Member of the Council, of the Institute of Civil Engineers. It will be clear to all who read the lectures in this volume how great an interest he felt in engineering science and work. More, perhaps, than most architects, he studied principles of construction, and applications of mechanical contrivance; and (in this respect, again, like his father) he regretted deeply the modern dissociation of the artistic and scientific elements of constructional work. In consequence, perhaps, of this sympathy of principle, he was led to

much personal association and friendship with the leaders of the engineering profession, greatly admiring the confidence in the future of their vocation, and the strong *esprit de corps*, which appeared to him to distinguish them.

In the year 1878 he received a distinguished honour —the more welcome because it seemed to mark the verdict of impartial foreign opinion on the high excellence of his architectural work, at a time when he had felt keenly the sense of disappointment and injustice at home. The first architectural distinction of the International Exhibition in Paris, held during that year—the great medal of honour—was awarded to him, while some of his most distinguished compeers held only secondary places. Possibly it was true that his own predilection for the French Renaissance style recommended him naturally to a French jury. Still the honour was a high honour, and it was highly prized.

The last buildings which he erected were the house of the Art Union of London in the Strand, and the new block of the Temple buildings on the Thames Embankment. The latter was, indeed, hardly finished at the time of his death. The former is a small work, but, as usual with him, very carefully studied, and a rich example of a quasi-Palladian style. In the Temple buildings, which are of considerable scale, and hold a prominent position on the Embankment, he returned once more to his favourite Renaissance.[1] The site was irregular, and the irregularity had to be provided for, not without difficulty, both in elevation and in

[1] The buildings belong both to the Inner and Middle Temple, Mr. Barry being architect to the former, Mr. St. Aubyn for the latter. It was agreed that Mr. Barry should be responsible for the elevation, while each architect took his part in the interior plans.

plan. The building erected under these conditions will probably be held by most critics to deserve the title of 'picturesque and original' given to it at the time of its erection, even if (as appears to be the opinion of some) it inclines to a certain over-pronounced character of richness and forcible effect. Certainly Mr. Barry took a singular pleasure in the work. He felt that in it he was not only dealing with a prominent site, but that he was on classic ground, and ground, moreover, which he had learnt to love by his constant attendance in the beautiful Temple Church, even if the sight of the great mass of the New Law Courts, dominating all things around, reminded him too painfully of the great opportunity of which he had been deprived.

Some other minor works were in hand, especially designs for new schools and farmhouse and cottage, and new lodges for his kind friend and patron Lord Crewe, on completion of the work at Crewe Hall, which of all others had been fullest of pleasure, and freest from all drawbacks of anxiety and discomfort.

But these he was not to carry out, nor a design for a mausoleum at Norwood, erected since his death.

Amidst all this varied activity the end was silently and rapidly drawing near. He was happily free from all domestic trouble and sorrow, since the loss of a child, almost in infancy, many years before, and from pecuniary anxiety and difficulty. He mixed much with society, artistic and general; he enjoyed it greatly, and delighted to welcome his friends with an unfailing hospitality; in it he found relaxation, and in it he was well fitted to take a leading and genial share. Whenever he was tired out with the labour and the worry of professional life, a brief visit to the Continent was to him always a delightful and an effective remedy.

But, though he had experienced little serious illness, his constitution was not robust, and now showed signs of failure; he suffered much from bronchial and throat affections; and began to have recurring attacks of sudden illness, which were probably connected with weakness of the heart. Still he might probably have lived to old age, but for the effect of the unusual anxieties and troubles, which have been briefly described above. They told upon his nervous system, produced sleeplessness, took away the elasticity and hopefulness, on which the vigour of life so greatly depends, and made him feel, as he himself declared, prematurely 'worn out.' His condition of health had long been a subject of much anxiety to his wife and family; of late it had begun to be so to himself. Under medical advice, he had actually determined to give up work and leave London for a time, as soon as his Lectures of 1880 were over. Yet only a short time before his death, he had consulted eminent authorities, who saw no reason to apprehend immediate danger, or to prescribe immediate flight from home work, and from the London atmosphere, in that year of dense fogs unusually fatal to health and life.

The end itself came with startling and terrible suddenness. He had delivered three of his six lectures in January 1880, feeling somewhat stronger and more vigorous than had been usual with him of late. On January 27 he had dined with the Council of the Institute of Civil Engineers, and had struck many who were present as showing more than usual of his ordinary geniality and humour. Thence he made his way up to the Council of the Royal Academy, on one of those nights of dense fog which he ought never to have faced. But there were some not unimportant matters

in hand, connected with certain discussions as to the conduct of the affairs of the Academy, which had created much division of opinion, and given him some pain. He therefore thought it a duty to be present in his usual place ; and he had been in the room about an hour—taking part in the discussion, but not with his usual clearness and vigour—when, almost in the act of speaking, he fell suddenly aside into the arms of Mr. Pickersgill, his old and tried friend, who sat next him. He asked faintly, 'Who is it?' and before the answer could be given, he was gone—dying literally 'in harness,' and, so far as can be conjectured, without a moment's pain. Medical aid was of course summoned at once, but it came too late ; and when his wife and his brothers, who were summoned immediately, arrived in haste, only knowing that he had been struck down by sudden illness, he had been some time dead. The cause of death seems to have been a quasi-apoplectic stoppage of the heart, caused by inability to overcome the obstruction produced by *emphysema* of the lungs, and aggravated by the unhealthy condition of the atmosphere. The shock was terrible, even to his colleagues. Probably few council-tables have ever seen a more startling exemplification of the nearness of the great change of death to all the eager interests and busy occupations of life. But what it was to the wife, from whom he had parted in apparent health in the morning, and the near relatives, who, in spite of some anxiety for him, had had no reason to anticipate any danger to life, it is impossible to describe. Although he had done and laboured much, it seemed to the eye of man as if 'his sun had gone down while it was yet day.' At such a time thought and even emotion are silent ; only faith dares to look up to the Great Master, who

calls His servants away, when He knows that their work on earth is done.

The old Greek saying may perhaps be extended to bid us estimate, not merely the happiness, but the whole value and meaning, of any man's life, only when it has been closed by death. Over a grave—especially a grave suddenly opening in the very midst of the busy ways of this world's occupations—men speak gravely and thoughtfully; and, while their verdict is tinged with the kindliness and charity which the old proverb suggests, yet at the same time it is apt to be pronounced with a more undisturbed truth of judgment than is possible in the conflicts and confusions of this busy world. So it certainly was with the subject of this memoir. Notices in the ordinary newspapers witnessed to the place which he had filled in the public eye, and to the ability, integrity, and grace with which he had filled it. The professional journals—the 'Builder,' the 'Architect,' and the 'Building News'—commemorated more fully his architectural services to the cause of Art and of public usefulness, and criticised, generously and candidly, the works which he had left behind. The various Societies to which he had belonged—the Royal Academy, the Institute of British Architects, the Architectural Association, the Hospital for Sick Children—all sent resolutions of regret and sympathy, following the example which the Queen (with her Majesty's unfailing kindliness) had set by a telegram to the Academy immediately after his death. But over and above these public testimonies, letter after letter told how large was the circle of friends by whom, for his own personal sake, he was missed and mourned; and it was notable that all who had ever been employed under him, in his office or in his architectural works, expressed

with especial depth of feeling the sense of the genial and considerate kindness which had always cheered their labour. Making all allowance for the natural warmth and tenderness of feeling which belong to the hour of mourning, those whom he left behind could not but feel how entirely the desponding thoughts, which had sometimes suggested to him the bitter idea that he and his works met with little appreciation, were falsified by these full and unanimous testimonies.

The funeral took place at Willesden Cemetery on February 3, 1880, with all the simplicity which he would have himself desired, but with a full attendance, especially of his professional brethren. The 'Builder' of February 7 says (in conclusion of a kindly and discriminating sketch of his life and works) :—

> The Rev. Canon Barry, brother of the deceased, officiated in the cemetery chapel, and at the grave. The six pall-bearers were Sir F. Leighton, the president, and Mr. Pickersgill, the keeper, of the Royal Academy; Mr. Whichcord, the president, and Professor Hayter Lewis, vice-president, of the Royal Institute of British Architects; Mr. A. B. Mitford, the secretary of Her Majesty's Office of Works; and Mr. W. H. Barlow, the president of the Institution of Civil Engineers. The mourners who followed the coffin from the house in Oxford-square were Mr. L. E. Barry, the only son; Mr. Charles and Mr. J. W. Barry, brothers; Mr. W. H. Barry, cousin, and Mr. C. E. Barry, nephew of the deceased; Lord Crewe, Sir H. A. Hunt, Rev. E. James, Dr. Tweedie, Mr. Cattley, Mr. Neate, Mr. Horace Jones, and Mr. Plucknett. The following members and associates of the Royal Academy, in addition to the president and the keeper, attended at the cemetery: Messrs. Dobson, Horsley, Marks, Shaw, Street, Alma Tadema, Yeames, Fildes, Pearson, Prinsep, and Waterhouse; also Mr. Eaton, the secretary of the Academy. Amongst the members of the Institute of Architects, and others who were present in addition to those already named, we noticed Messrs. Penrose, Currey, I'Anson, A. W. Blomfield, M'Vicar Anderson, A. Cates, Ewan Christian, J. Clarke,

John Gibson, J. L. Pearson, William H. White, O. Hansard, T. H. Wyatt, Matt. Wyatt, R. W. Edis, S. F. Clarkson (President of the Architectural Association), R. C. Page, C. Fowler, C. F. Hayward, J. Brooks, E. H. Burnell, J. Edmeston, Geo. Goodwin, H. Parsons, Thos. Porter, Dr. Phené, E. H. Martineau, G. A. Dunnage, P. G. Smith, R. P. Spiers, J. Norton, G. H. Herbert, Jas. Forrest, J. G. Crace, J. D. Crace, Perry, S. Weil, J. Honeyman, J. W. Penfold, &c.

This memoir, prefixed as it is to a specimen of his professional work and thought, cannot rightly enter into the more sacred memories which are treasured by private affection. Nor can it, of course, venture on any estimate of his architectural merits. These it must leave to the judgment of the world, which, in the case of an architect more than that of any other artist, has the materials for such judgment always before the public eye. But I shall incur, as I trust, no accusation of mere partiality or presumption, in recording that which has been established by ample testimony from without —that few men left behind them a more vivid remembrance of great and varied talents, of a disposition full of generosity and kindliness, and a character above all suspicion and slander. Those who knew him, either in public or in private, will bear, I believe, a unanimous witness to his singular truth, uprightness, and large-heartedness of character, capable alike of warm personal affection, and of wider sympathies beyond the circle of home or friendship, deserving and winning the greatest confidence, and shaming, both by word and by example, all evasion of duty, and all meanness and dishonesty, even of thought. Nor will there be, I think, a less unanimous impression of the vigour, quickness, and versatility of his intellectual powers, not only as exercised on his own chosen subjects, but whenever they

were brought to bear on matters of more general interest, literary or æsthetic, social or political. Whatever he saw he always saw clearly; whatever judgment he pronounced was always definite as to basis and clear as to expression; whatever he took in hand he pursued consistently and resolutely, knowing exactly what he meant, and clearly conceiving how to set about it. Perhaps the most remarkable point in his intellectual character was the union in him of two qualities not always found in combination—considerable enterprise and originality on the one hand, and, on the other, a singular clearness and impartiality of judgment. On his architectural principles and genius, and on the results, whether of design or actual buildings, in which they are embodied, there must be, indeed, greater variety of opinion. But, if any judgment can be formed from public professional criticism, it may be safe to treat as acknowledged his union of artistic taste with scientific intelligence and practical ability, his appreciation of various forms of architectural excellence, his proved versatility of talent in various styles, and his unfailing readiness of resource in meeting various conditions and emergencies. Beyond these things it would be wrong to go: all else must be left to other judgments.

FIRST SERIES

ON GENERAL ARCHITECTURAL PRINCIPLES

LECTURE I.

INTRODUCTORY.

ON THE VARIETY OF INTEREST IN ARCHITECTURE.[1]

Object of these Lectures.

NOTHING would have led me to address you from this place, but a sense of the duty and obedience which each member of the Royal Academy is bound to manifest, when he is called on by the authorities to place his services at their disposal, for the furtherance of art. I cannot but feel that there are many who are far more competent to assume the position of an architectural teacher; and that the engrossing occupations of active professional life from early years are not the best preparation for a work needing the learning and studious research, which are best acquired in the quiet meditation of the closet.

It is in the spirit of obedience to the call of authority that I shall address you, and I know I shall not ask in vain for your co-operation and attention.

There may be present those who have the right to teach me rather than to learn from my teaching. To them I must appeal for their forbearance, and must ask them to consider that these lectures are mainly addressed to students, not of architecture only, and that it may therefore be necessary to dwell upon aspects or details of art, which to the more experienced are but the repetitions of a twice-told tale. It is not the first object of a professor in this place to impart the technical knowledge which can be best learned elsewhere; and I shall rejoice if, by dwelling on general principles, I am able in any way to excite an interest in architecture among the students of painting and sculpture, and so aid in paving the

[1] Delivered on accession to office, March 14, 1874.

way for that union of the arts, the absence of which in these days we so often have occasion to deplore. If it were not for the thought that words uttered here may, perchance, fire the imagination of the younger generation, and inspire them with the resolution to emulate the deeds of the architectural giants of our glorious artistic history, I should feel no justification in occupying this chair. It is to students alone that I presume to offer counsel and advice.

Problems before architectural student.

(I.) In entering upon a course of lectures delivered with this object, it must, I fear, be admitted that the prospect before the architectural student has never been more beset with perplexity than at the present moment, when so many difficult problems are daily pressed upon us for solution.

What form is our art to assume? On what styles of past days is it to be based? or, is it to be altogether new? In what way are modern scientific discoveries to be dealt with? Is an architect to be a sculptor and a painter also, before he can be termed a true artist? These are only a few of the controversies which will readily occur to your minds as now calling for consideration; while, over and above them all, voices are loudly heard proclaiming that our whole system of architectural practice must be revolutionised, and that success will best be achieved by deposing the architect from his post of supremacy in favour of a commune of workmen. Many signs of the times even point to a disorganisation of public taste, leading to an indifference to what is good or bad in architecture; and it daily becomes more necessary to find some resting-place on true principles of art.

Modern declension of artistic spirit.

If we look around on the state of architecture generally among civilised nations, we must be struck by the fact, that all over the world a period has occurred, when its productions have ceased to display the higher artistic qualities formerly inherent in them, as if they had been suddenly paralysed by some fatal disease. In our own country we can trace the wonderful progress of Mediæval art, from the days of Harold to the time of the Edwards, and thence by a process of decline to its fall in the Tudor reigns. We have since seen revivals, both of Classic and Mediæval types, of which I must hereafter speak a little in detail. It is certainly difficult to assign the reason why, up to a particular time, it

appears to have been natural for men to love and achieve beauty in their works; while, in later days, a bald ugliness seems to have been the common heritage. We know that, formerly, every detail of architecture was replete with interest, as if by instinct, so that the very hinges of doors were works of decorative art. This, moreover, was not done, as it might be done now, in exceptional cases; but it was the rule. The men who carried out these works were evidently penetrated with the spirit of their art; and it was as natural to them to work gracefully as it is to the modern workman to create useful ugliness.

Diversion of interest to other subjects.

This difference of spirit dates chiefly from the discovery of printing and the Reformation, which encouraged freedom of thought, and opened to the intellect of mankind paths till then closed or little frequented. We cannot suppose that the sum-total of human intelligence decreases, as years roll on and the world grows older; but may it not be that we shall find the explanation of the apparent decline of the artistic faculties in the diversion of force, occasioned by the devotion of the intellect to other lines of thought and achievement? In times past the want of facile means of communication kept the bodies of men rooted to the spot where they were born, and the absence of intellectual freedom closed to their minds those spheres of energy which are now open to all. Abbeys and cloisters contained recluses, who, in separating themselves from the world, were glad to devote themselves to those artistic pursuits—such as architecture, painting, sculpture, music, illumination, embroidery, and the like—which would add to the splendour of the church and its services, and would be free from any suspicion of heretical free-thinking. The pursuit of learning has had an opposite effect. It has prevented the intelligence of the world from being concentrated on any one subject or group of subjects, and it has caused the great mass of the people to care more for philosophy and science than for art.

Development of scientific activity.

We are surrounded in this place by the buildings of learned societies, and there are many others scattered about London and the country, while the progress of science adds daily to their numbers. I was astonished to hear lately that for telegraphic engineering, a profession almost of yesterday,

there is now an institution numbering upwards of five hundred members. Before this scientific activity became possible, we may assume that a large portion of the intellectual and constructive powers of mankind, which are now given to it, was likely to be devoted to some of the various branches of art, which was, in fact, the common language of the educated classes. We may as well expect to turn back rivers to their sources as to reverse the great tide of modern thought; and all experience of its tendency shows that it flows in the direction of the division of labour. The stream of knowledge is now so great that no man can venture to think he has mastered it all; and even the greatest minds must be content to follow thoroughly some rivulet of truth, while accepting on other points the dicta of fellow-inquirers. This being so, we cannot expect architecture to be any exception to the general law.

New functions of the architect.

Considering, moreover, the tendencies I have alluded to, can it be seriously imagined that the architecture of the future is to be committed to individual workmen, giving no guarantee of harmony, and owing no allegiance to the superior authority of the architect? The whole teaching of experience appears to be opposed to such a proposition, and to prove that the architect of the future should be not only a skilled artist, but also a man of scientific knowledge, and in harmony with the spirit of his time. While it is true that we should gain by having our buildings expressions of the variety of interest, caused by the devotion of many minds to the details of the work, it is still essential that there should be a guiding spirit, and this must be that of the architect. The true reform of ordinary architectural practice would be to lessen the oppressive burden of petty business cares, which, under our present system, press daily upon him, and tend to deaden his devotion to pure art. Every age of the world we live in has its own special characteristics, and we misunderstand the teaching of history, if we suppose that the outward signs of progress must always be alike, and must be the same in kind and degree as those to which men have been accustomed in the past. The architects of old worked, as we have no doubt, in perfect harmony with the spirit of their times, and we must expect to find that their mission and

ours differ widely, according to the variation of circumstances and the characteristics of different ages.

Modern financial difficulties.

In many respects it may perhaps be asked whether architects, in these utilitarian days, do not work under less favourable conditions than their brethren of old. It is difficult, for example, to approach the composition of a great work of art with a mind depressed by insistence on the 'lore of nicely calculated less or more.' In private works, of course, financial consideration must always have ruled; but it is not easy to believe that the great public monuments of antiquity were constructed on this disheartening principle. We can scarcely expect again to have great architectural triumphs, if the question about any important public work is, not—how shall we get a worthy building? but—how little can it be made to cost? We cannot fancy the architects of Westminster Abbey, compelled to cheapen their design by reducing their mouldings, omitting the diapers and carvings, or leaving out the groined roofs, in order to save expense. It would, of course, be easy to blame architects for failure under such circumstances; but would it be fair to do so?

I only put this question hypothetically; for, though we may conceive that such things might happen in Laputa, we must not suppose that they could occur in a country like ours, so rich and so prosperous, that it is the treasure-house of the world—a country which provides, moreover, museums, picture galleries, and a Government Department of Science and Art, for the cultivation of the public taste. Great nations, however, sometimes do little things, and their very greatness makes them impervious to criticism. It has been said that no one but a banker could walk down Lombard Street in a bad hat; and, in a similar way, it is perhaps only rich communities that can afford to show with impunity a public indifference to art. At any rate, in our own case, artists may be allowed to hope that the spirit of utilitarianism, pure and simple, will not be allowed to be the sole guide of public policy in respect of architecture. It will not be creditable to us if history should record that, with pecuniary resources beyond those of any other time or country, we leave as our contribution to architectural art, public works,

showing, in their mutilated features, proofs only too evident of a parsimonious origin.

Union of scientific and artistic requirements.

From these possible difficulties of the architect, we may turn to other considerations. We are often told that a new style is the want of the time, though why this should be required more than a new language, it is difficult to say. We have, however, to decide whether novelty is to be our aim in architecture, or we are to look to archæology. Again, is engineering architecture? and if not, where is the missing link? You will perceive how many-sided is the study of our art, and how much it differs in that respect from painting and sculpture. One difference will at once suggest itself, inasmuch as architecture is a science as well as a fine art.

A painter designs his picture, happily for himself, with no thought of constructional or economical difficulties. The shadows which fall so easily from his brush must be constructed by the architect. The latter must see in his mind the effects which he intends to produce, and must build them up, not on canvas or paper, but gradually and painfully by the hands of others. If the result fall short of his expectation, he has no power of alteration, no facilities for heightening lights or deepening shadows. He must be an artist in his design, a man of science in its execution. His science, moreover, must be useful, and not merely speculative. Architecture must not only please the senses. She has to justify her very existence by usefulness. Externally, she may indulge in grace of form, limited only by the exigencies of climate, construction, and by durability. Internally, she must accept the necessity of the obligation to combine convenience and fitness with beauty. Architecture has then to contrive and construct its artistic effects, remembering always that they must grow naturally out of the circumstances of each case, and that the greatest art conceals its modes of operation. Nothing can be worse than the obtrusion of details, obviously not required except for display, sacrificing the higher qualities of art to a pretentious fussiness. Without ornament, indeed, architecture as a fine art does not exist. Nevertheless, though ornament may be essential, it must be an integral part of true architecture, not a mere *appliqué*,

like the beauty patches of the Court ladies of Lely or Kneller.

It follows, therefore, that architecture must be studied by those who would practise it, both as a decorative art and as a useful science.

Variety of interest in architecture.

(II.) If to some architecture may seem to be degraded from the position of a fine art by its utilitarian associations, it must not be forgotten that to this circumstance it owes much of its attractiveness to all sorts of people. It may, therefore, be well briefly to consider this phase of the subject, and to pause for a moment in order to examine the grounds of interest which architecture possesses for various minds.

We shall find that it has many charms for many votaries, and that it may be studied for various reasons, and from different points of view. Thus, for some its interest is mainly archæological or historic; for others, scientific; and for others, purely artistic.

Archæological interest.

Of these, the archæological is, perhaps, the aspect which is most common; for who is there so indifferent as not to care for the greatness of the past, and the proud deeds of ancestors? The sentiment of innate patriotism alone forbids that national monuments of architecture inherited from antiquity, and handed down from age to age, should be allowed to perish; and it is, therefore, not surprising to us to find that a certain archæological knowledge is prized as a necessary part of the acquirements of educated men. Indeed, some sort of archæological taste may be said to be universal; for even in the most savage tribes, traditions and ancestral 'customs' (often, as we know, of the most horrible nature) are practised and venerated simply for their antiquity.

This kind of archæology is, of course, far removed from art; it interests itself in objects of antiquity because of their age, and not because of their beauty or artistic value; it seeks only to satisfy those cravings for a knowledge of the past, which are as much a part of our nature as the yearning to discover the secrets of the future.

In architecture, archæologists find a fruitful field of inquiry, apart altogether from any search after beauty. Heraldry, for example, one of the most important of archæo-

logical studies, is so allied with architecture that it is difficult to study it without at the same time learning to appreciate architectural forms, and the various gradual modifications of them, which have been brought about at different dates. Thus, to mention only a trifling instance, the shape of the shields on tombs will serve to mark the date of the monument; and no archæologist would confound the early twelfth-century shields of the Knights Templars in the Temple Church with those which abound in Henry VII.'s Chapel at Westminster. In the one case there is a long and simple acutely pointed triangle; in the other, more complex curves, and a width nearly equal to the height. This, of course, is more an archæological than an architectural detail, but it may be referred to as showing the importance to the archæologist of observing architectural forms; and such observation will naturally lead up to the more extended inquiry of the architect into those successive changes of the shapes of columns, arches, window tracery, and the like, which mark so clearly the gradual advance and decline of Mediæval architecture in this country.

In nothing has our time been more remarkable than in the impetus given to archæological inquiries; and there are now few parts of the country which do not display results of the activity of those who have interested themselves in the architectural remains of past days.

Restorations.

This archæological taste has found its chief vent in the very remarkable revival of Mediæval church architecture which the present century has witnessed. A movement partly theological, partly archæological, has covered the country with restorations, and new works carried out in the spirit of restorations. The expenditure on our cathedrals and old parish churches has been enormous, and besides this, new Gothic churches, schools, and other buildings, chiefly ecclesiastical, have arisen, as if by magic, around us. This circumstance is the more remarkable, when we contrast with it the comparative apathy on such subjects in France, and the continent of Europe. It is also notable, as having occurred at a time, when free thought is pushed to its utmost limits, and when, in most things, men are little apt to regard the past with unquestioning reverence.

If we ask, however, how far the revival movement has forwarded the interests of art, the answer is not quite clear, and probably the time is hardly come, when a complete answer can be given. A great measure of success has doubtless been obtained from an archæological point of view; but it may be hoped, rather than asserted, that a greater insight has been gained into the true principles of architecture, which may lead it to progressive glories hereafter, such as those that have been chronicled in the past. To critical observers, who regard this state of things with impatience, and are ever calling for novelty and revolution, it may however be suggested that a knowledge of the past is the best education for progress in the future, and that, after the period of artistic darkness which marked the commencement of the present century, it was inevitable that any earnest revival should assume an archæological complexion. It may be that this powerful force has now spent much of its power; and it is certainly difficult to see how revivalism, pure and simple, can go much further than it has already done; but the question still remains whether our art in the future is to be based on Mediæval principles, to which alone some would bid us look for the secret of success. If this is to be the case, it follows that no other style should be cultivated. Is this a conclusion that can be accepted, with the evidence around us, of what the revival has done for us? Is it consistent with the development of the sister arts in all their fulness, in connection with architecture? May it not rather be due to an exaggeration of that archæological study of which we have been treating, pushed beyond the point at which it ceases to act as a trustworthy guide? Their bearing on true art.

It is the more necessary to guard against the fascinations of a purely archæological view of architecture, from the circumstance that our Mediæval revival has been from the outset very much mixed up with questions of religion and ritual. Those matters can of course be only barely alluded to here; but it is necessary for the student to keep them in mind, if he would understand clearly the history of the powerful movement to which reference has been made. Architecture has in all ages been intimately connected with the religions of mankind; and the great monuments which remain to us Their connection with religion.

are for the most part the result of the devotional feelings of those who erected them. Thus we have the tombs and temples of Egypt and India, the temples of the Greeks, and the cathedrals of the Middle Ages. It was natural, therefore, that any great religious revival should show itself in our architecture.

In addition to this ecclesiastical influence, there has also arisen a keen desire to inquire, more minutely than has hitherto been usual, into daily details of past history, and historians have sought to give us careful pictures of the manners and life of olden times. No one pursuing such researches could neglect architecture, which yields the most valuable results, when studied in connection with the history of people and countries.

It will thus be seen that to archæologists architecture offers a very storehouse of treasures, and that in that great study of mankind which we call history, the architect, the antiquary, and the historian work hand in hand.

Scientific interest.

(III.) We have now to consider another mode of viewing architecture, distinct from archæology, and having little or no reference to its artistic character.

Architecture being, as has been said, a science as well as a fine art, we cannot afford to neglect the attractions she presents to scientific men. Science being essentially progressive, we might fairly expect Architecture, in so far as she leans on Science, to be progressive also; and the complete separation of what we call engineering from all sympathy with architecture is a fact, which is rather suggestive than satisfactory.

Mechanical appliances.

In seeking to forecast the future prospects of architecture, it is impossible, therefore, to overlook its scientific and mechanical, as distinguished from its archæological and artistic, qualities. No one can doubt that in our time these characteristics of our art will be full of interest to many who, in other respects, care little about it. They will dwell upon the fact that architecture is a useful art, and has no *raison d'être* except her powers to serve the necessities of mankind. To these the science of building offers special attractions. How was it that nations on whom we are apt to look down have carried out works, the difficulties of which

excite even now our wonder and admiration, in spite of our greater mechanical knowledge—works, dating, moreover, from what may be termed the infancy of the world? The great monuments of Egypt, for example, are sufficient to raise numerous questions of the greatest interest from this point of view—Egypt, whose pyramids, temples, and colossi seem to regard the works of the engineer of to-day, which are now being urged on around them, with the contempt of a mighty unchangeable monarch for an upstart of yesterday —in a region, moreover, where indigenous architecture seems to have died out, and Western civilisation is represented only by the shriek of the locomotive in the silent wastes of the African desert.

Adaptation to climate.

Few things, again, can be more interesting and suggestive than to study the influences of climate, race, and habits, on architectural forms, and to notice how construction has given birth to beauty—as, for example, by the introduction of the arch, the use of columns, or the creation of bold projections to shelter from the rays of the sun. These may all be termed the utilitarianism of our art, and are as interesting to the engineer as to the architect; but you will see how closely they are connected with artistic beauty, and how necessary it is for the architect to accept frankly and thoroughly the conclusion that his art must be accordant with the laws of convenience and common sense. How far this conclusion may be carried is the problem before him. Make convenience the absolute ruler, and the result is the ugliness and barrenness of modern engineering. Depose it altogether, and our art will become the laughing-stock of a world, fully alive to all the advantages, though perhaps not a little deaf to the dangers, of a highly wrought and mechanical civilisation.

Use of special materials.

Engineering, again, may almost be said to have discovered the use of iron, as employed for construction in these later times; and in the choice of materials, the architect must, in any case, be influenced by scientific considerations. Materials, moreover, govern design. Assuming that the principles of the design of the Parthenon are based upon traditions of wooden construction, we can see that the modifications of size and form of the various parts, which

have been adopted in marble, were the necessary consequence of employing a different material. This principle of using fitting materials, and designing accordingly, was never better carried out than by the Mediæval architects of our own country. Thus, in districts where stone was good and abundant, we find groined roofs and elaborate masonry. In places where timber was the best material available, we see the curious timber constructions, and the beautiful open roofs which distinguish the architecture of Cheshire, Lancashire, Worcestershire, and some other English counties. The brick architecture of North Germany and Belgium will also readily occur to you as an illustration of this principle. In this respect as in others, you will see how our art, in its best days, has always recognised utility. We may be sure it must always preserve this character, if it is to retain the respect of mankind.

In the aqueducts of ancient Rome we have a proof that it is not necessary that an engineering work of the most utilitarian character should be tasteless and ugly; and there can be no reason why the architect should not sympathize with the engineer, quite as thoroughly as he has been accustomed to sympathize with the archæologist and historian.

Artistic interest.

(IV.) It is, however, the merit of architecture, that, while admitting to the fullest extent the varied interests to which I have referred, it possesses yet another, the greatest and most comprehensive of all, in its artistic character. The eldest of the Arts, it welcomes under its roof all that can claim a place in that glorious fellowship. Indeed, architecture cannot be said to discharge its true mission as a fine art in its fullest sense, except in alliance with its two sister-arts of Sculpture and Painting.

Comparison with sculpture and painting.

This consideration can hardly be too emphatically insisted on as regards its bearing on the style of the future, of which we hear so much now-a-days. With regard to this combination, it must always be remembered that architecture, like music, is a conventional art, while painting and sculpture are imitative arts. Nature must ever be, in a greater or less degree, the teacher and judge of the latter; while architecture can be referred to no rules but its own, and to that subtle sense of beauty and fitness which is

implanted in the human breast. It is this instinct, refined and cultivated by art, which forbids that we should be satisfied with the bare provision for our wants supplied by engineering, and makes us desire some grace to be added to the simple necessities of structure. To add this grace without affectation or untruthfulness is the duty of architecture as a fine art, and her work must not only display beautiful detail, but also fine proportions.

Value of proportion.

It is but too common to overlook the absolute necessity of good proportion, and to rely on ornament alone. This dangerous tendency has been, perhaps, somewhat fostered by the greater attention lately given, and rightly given, by students to free-hand drawing. It is a tendency to be carefully watched, as it easily leads to abuses. Nothing can be subtracted with impunity from a perfect work of architecture; but it can better suffer a loss of its ornamental details than an injury to its proportions. The Greeks were probably the greatest masters of proportion the world has yet seen; but the tendency of our own later time has too often been to ignore this important quality, to the loss of refinement and of true architectural grace.

Study of true harmony therein.

Perfection of proportion does not mean, however, neglect of scale, as is sometimes erroneously supposed. We have all heard it said that St. Peter's at Rome looks smaller than it really is, in consequence of the harmony of its proportions; but this is, in my opinion, altogether an erroneous and misleading statement. If St. Peter's does not impress us with its real size, we must seek the reason elsewhere than in its good proportions, for it can be no merit in a great architectural work to efface itself. An architect is not to be thought successful, if the gross result of his employment of great opportunities is only to produce, at a vast cost, the impression that would be created by lesser efforts. The real truth about St. Peter's is, not that the proportions reduce the apparent scale, but that the harmonious effect of the proportions is marred by incongruous detail and fewness of parts, all on a gigantic scale. The enormous order and huge figures, and not its beautiful proportions, have to answer for any disappointment with St. Peter's. If the parts of its architecture had been smaller and more numerous, with its

general proportions remaining as at present, St. Peter's would have appeared, as it is, one of the largest buildings in the world; and the interior, more particularly, would have gained the effects of scale, without losing those of proportion which it now possesses.

The student will learn from this example that he must not be satisfied with the sensation of pleasure or dissatisfaction, which he experiences when face to face with great monuments of architecture; he must inquire the reasons of their success or failure, and seek to define the secret of the harmony or incongruity of their details and proportions. Those who study architecture in this spirit, will discover beauties which are hidden from the mere utilitarian observer, and they will at the same time gain an insight into the difficulties as well as the resources of their art.

Common sense and educated criticism.

Owing to the universal interest which architecture possesses, we find that it can attract the unlearned, probably to a greater extent than the sister arts are able to do.

The grand effects produced by scale alone may often suffice to explain the impression produced on the minds of the multitude, by an art which does not work in aristocratic seclusion for the benefit of the few, but appeals openly to the many. Of course, it will only be the few who are qualified, by study and knowledge, to speak authoritatively on its inner subtleties, and its broader characteristics must always be those that will interest the uninstructed observer.

To be able to see properly will ever require education, and the power of criticism is not an instinct, although the power of grumbling may be so. There can be little doubt that an art so essentially conventional as architecture can only be fully appreciated by those who have acquired an insight into its principles. Whether in respect of painting, sculpture, or architecture, whatever there may be of instinctive appreciation in the ignorant, the power of sympathetic criticism can only be gained by knowledge. In fact, in these cases there is room for what may be called the science of art—science being, after all, only the concentration of the existing accurate knowledge of any given subject. Indeed, even in observing nature itself, men find the advantage of acquiring instruction, although it might have been supposed that

enjoyment of her charms would be a thing of course. There cannot, however, be a doubt that this feeling has varied greatly with different races, and even with different generations of the same race. Those who know Mr. Ruskin's descriptions —say, for example, his analysis of clouds, trees, and mountains—will see how much increase of pleasure in the beauties of Nature herself may be gained by that scientific study of her phenomena, which forms, in effect, the art of 'how to observe.' Knowledge, then, is required in the critic as well as in the artist, and, where it abounds, a genuine criticism is of the highest value. It points out to the younger aspirants the way of progress, and exhibits the moderation and diffidence which accompany true knowledge. It is, of course, free from that arrogance and bitterness which has led Lord Beaconsfield to define critics as 'those who have failed in literature and art.'

Hopes of architectural progress.

(V.) I have now touched lightly upon the interest excited by architecture in its three-fold aspect—archæological, scientific, and artistic. The latter quality is that with which we have chiefly to deal in this place; but the others must not be neglected. There can surely be no reason why the progress of Architecture should be regarded as at an end, when we consider the permanent interests which she has in her keeping. Whatever changes the future may bring forth, the art of building must be a necessity, and there will always exist tastes and artistic aspirations, which will refuse to be satisfied with bare engineering. Architecture, then, must have charms for all; reserving the greatest enjoyments for those who, having learned to observe properly, can enter into the inner sanctuary. It is not necessary that she should demand a unanimity of taste, which, if possible at this stage of the world's history, would be undesirable; and she is, therefore, able to rely on that universal love of beauty, to which, after all, must be the final appeal of art.

We have seen that there should exist among civilised men an interest in architecture, which, while exerting varying degrees of attraction on different orders of minds, may yet lay claim to a catholicity denied to other developments of the artistic faculty. To the archæologist she offers the key, by which he can open the stores of knowledge of the past;

with the engineer, she can co-operate in working out the destinies of the present; while to the artist, whether painter, sculptor, or architect, she gives a welcome, and displays treasures of exquisite beauty and infinite variety. Moreover, striving onwards for the future, while reverencing the past, she does not hoard her charms in any churlish spirit, but throws open her treasures to all the world. She connects herself naturally with the history of mankind, with the public and private life of nations, with their knowledge and progress. She has ever been the handmaid of religion—the nursing mother of art.

Such has been Architecture in the past. What is she to be in the future? Are her triumphs over? Are we to be content with the copying of barren revivals? Surely this cannot be. All sense of artistic beauty has not vanished before the steam-engine.

Conditions of professional success.

On such of you, gentlemen, as have just entered, or are about to enter, the noble profession of architecture, these questions will press, and from you will require a solution. If they are to be answered satisfactorily, there must be no half-hearted devotion to your art. Moreover, in these days, far more than even in those of Vitruvius, an architect should not be the mere master-mason, to which some writers would seek to reduce him. No one can afford to lightly estimate the value of general culture, and certainly not the architect, as a member of a responsible, difficult, and learned profession. Remember the catholicity of art, which forbids bigoted intolerance and opinionated dogmatism. Study carefully for yourselves the remains of ancient masterpieces in our museums, and in the grand old buildings both abroad and at your doors, and avail yourselves fully of the facilities which are offered in this place and elsewhere for freehand and figure drawing. As regards science, do not let it be said that architects are behind the age, but qualify yourselves to take your part in it with knowledge, enthusiasm, and integrity.

Great characters lead to grand ideas; noble thoughts produce noble deeds; and if you will bear this in mind, my first professorial lecture will not have been given in vain.

LECTURE II.[1]

ARCHITECTURE IN RELATION TO NATURE AND HUMANITY.

Introduction.

I MAY perhaps profitably commence the first lecture of a new series by attempting to consider what may be the scope of an architect's duties, in the ever-changing circumstances, among which he is likely to be called upon, in the future, to apply his art. Like all true artists, he will inquire how far he may expect to draw his inspiration from Nature; and we may therefore briefly consider what are the lessons which Nature can teach us. As architects, moreover, must work in the midst of mankind, we may further see how they are to apply the principles they may have learnt from nature, to their practice in crowded cities, and among the fever-haunted dwellings of the poor. To do this successfully, will tax their powers, both as artists and constructors, and may raise the question of that division of responsibilities under these two heads, which has been a favourite idea of some theorists.

Relation of Architecture to Nature.

(I.) Architecture, with all its glories, is but a work of man, easily comprehended, imitable, finite. How then can it be compared with the creation of God, infinite in variety, beauty, and power? The study of the former is necessary to the instruction of a skilful architect. A reverent love and admiration of the latter seem to me an essential portion of the character of a true man.

Less direct than in the sister arts.

I would not have you infer, however, that I would draw any sharp line of demarcation between the love of Nature and the love of Architecture. There is, and should be, no necessary discordance between the two, though I cannot but

[1] Delivered at opening of series, Feb. 24, 1876.

admit, that there is a certain inferiority in this respect of our art, as compared with painting and sculpture.

These latter draw more directly on the fount of inspiration supplied by Nature. To an architect, any direct borrowing from nature is forbidden. He may accept principles, but their application must be determined by the rules of art, which exclude actual imitation. I do not, of course, forget the pleadings of some among us, for the exact reproduction, in architectural details, of examples of life from the animal and vegetable kingdoms. I pass this over for the present, not only as a controverted theory, but because it deals only with details, such as capitals, string-courses, key-stones, and the like, which are after all only the subordinate parts of an architectural design. To the composition, as a whole, no such naturalistic theory can apply. No one, so far as I know, has yet proposed to build a house in the form of a tree. In the crags of mountainous regions, a certain resemblance to castles may at times be imagined: but this would only apply to a distant view, which would take in the outline only, and not to the details and accessories, which would destroy all illusion on a closer inspection. We may dismiss from our minds any idea of direct imitation of Nature.

It is evident, therefore, that imitation of Nature being forbidden to the architect, our lesson from her, architecturally speaking, must be negative, and I think much may be learnt in this way. Bear in mind, however, that, as I said just now, we must look for principles, not for their detailed application.

Natural beauties—variety.

Let us, for a moment, try to analyse the effect produced on the spectator of natural beauty. He sees first variety; not any regular balance of parts, as in a great cathedral or temple, not formality, not regularity. No portion of a hill, river, or landscape, repeats any other part of it. The variety is infinite; symmetry, in an architectural sense, is altogether absent. Light and shade are not, indeed, excluded, but they are subordinated to colour—pure, abundant, and local. No two trees, boughs, or even leaves, are absolutely alike.

Motion.

Again, nature charms by motion, ever active, incessant. However still the sky, the leaves are restless, the waters ever

bubbling in their pebbly beds, the animals moving to fulfil their appointed destiny. The clouds never remain the same; at one moment rolled into heaps of smoke-like mistiness, at another breaking out into the likeness of 'gorgeous palaces, and cloud-capped towers.' We see them perhaps, for a time, wearing a dull and leaden garment, to find them breaking forth presently into chameleon hues of colour, which no painter can rival.

The architect, having fully recognised his inability to find actual precedents in Nature, has next to teach himself that in opposing her principles of beauty, he may sometimes find lessons for his artificial practice.

Architectural beauties—symmetry.

For, as we have seen, the principles which we admire in natural beauty, are exactly those which we neither wish, nor expect to find, in architecture. Against variety, we seek symmetry, formality, order; against motion, we seek repose, stability, unchangeableness.

Symmetry does not exclude variety in detail, but it requires a balance of parts, such as we do not see in the inanimate works of nature. In all great architectural masterpieces of antiquity, you will find this balance of parts, not forced, or overstrained, but arranged simply; in accordance, it may be, with routine or precedent; but satisfying both the imagination, and the actual sense of sight.

Not servile uniformity.

You will not misunderstand me, by supposing that I mean here by symmetry any rigid uniformity of centre and wings, nave and aisles, one on this side, and one on the other, regardless of the special circumstances of each case. No! I do not mean this: I am thinking rather of the symmetry which manifests itself alike in the Greek temple and Mediæval abbey; a recurrence of subsidiary details, each necessary to the other, a harmony of features, measured, orderly, and dignified. You may, of course, have a mere mechanical regularity, where each part may repeat its fellow, until it disgusts with its poverty and its insipidity. But none the less is it true that our art loves a true symmetry, and finds its greatest effects in a repetition of well-proportioned parts. You know the beauty of the 'long-drawn' aisle of any of our great churches, and the same principle holds good in more archaic structures, such as the great Hall at Karnak,

or the temples of India; while it also applies with especial force to the works of the Greeks.

Repose and stability.

Again, we seek in architecture repose and stability, as opposed to the motion of Nature. With her, everything is in perpetual change. The seasons press upon each other. Earth, air, and sky, have each their thousand signs of life; and with life come change and motion. The sighing of the wind, the murmur of the stream, the hum of myriads of insects—all these proclaim the prevalence of change, the provisional character of the world in which we live.

Against this, in architecture, we oppose our attempts at permanence—a permanence limited, indeed, by many shortcomings, but not without such a measure of success as to be able to exert a powerful influence on the mind. We know how strenuous and earnest have been the efforts of all ages in this direction. '*Non omnis moriar*' was the touching cry, half boastful it may be, but full of pathos, of the Roman poet. There is no history, no mythology, which does not indicate the repugnance of the soul to the thought of extinction. Whatever criticisms we may hear on theological systems, we come upon this solid incontrovertible fact, that all times and nations, all philosophies and religions, have revolted from the idea of annihilation, and have sought in our art for enduring memorials of their aspirations. This it is which gives to Architecture one of her principal sources of power. Of course, she has no actual charm against that terrible fiat of change which has gone out against all human work. Her arches totter, and her stones crumble. Her permanence is only relative; but, such as it is, it is a powerful influence, and affects us all in a more or less degree. The visitor to the Pyramids, to Athens, or to Rome, feels a new interest in the people to whom the monuments he sees around him were household words; and the contrast between what has been, and what is, is calculated to teach lessons of grave and serious import to the most thoughtless among us. Alas for those who are past such lessons!

The venerableness of architectural antiquity.

Architecture, then, has within its reach an interest due to the efflux of time, which is not shared by the other arts. The latter depend more completely on present sense. A symphony of Beethoven is neither more nor less sublime now,

than when it first started from the brain of its afflicted composer. It is the same with a sculpture of Phidias, or a painting by Raffaelle. These works of artistic genius owe nothing to time—in fact, they are more likely to be injured by it, than to gain anything by its influences. With us it is different; the mellowing effect of time on architecture has a charm all its own, linking the past with the present, blending one age with another, and exciting powerfully the imagination of men.

The hope of architectural permanence.

This leads on to the consideration of a point which I dare say troubles many of us. In what will the architecture of to-day interest our successors? A writer on art has lately inquired, 'Will the restorations on which this age has prided itself ever become a by-word of reproach, as similar works, vaunted in their own day, have become among ourselves?' I noticed an expression of the same feeling, not long since, with reference to a work contemplated by one of the most highly educated societies in this country. 'What guarantee,' it was asked, 'have we, that, in thirty years, the notions of the present day may not have become antiquated and shocking to the tastes of our sons and grandsons?' It is difficult to answer this question, if we are to have no higher aim than the fleeting fashion of the hour. I believe your safeguard will be in the application of common sense to architecture. Ask yourselves, not what is fashionable, but what is reasonable; for you may be sure that good architecture has ever been founded on reason and common sense. Fashion arises from a thousand passing influences, of all them more or less unworthy. Ostentation and vanity are its parents; with such parentage, it deserves to fall. If you would succeed in your art, avoid these pitfalls; seek to meet existing wants unobtrusively and sensibly. Do not believe that it is the duty of the architect to construct 'startling effects'; rather aim at strength, solidity, and simplicity; and thus you will be on the way to obtain that permanence of interest, which we admire in the achievements of earlier times.

Repose not feebleness.

Once more, there is no vulgarity in nature. So should it be in architecture. Feebleness, however, is not the negation of vulgarity. Churchwardens' whitewash is not the evidence of a pure taste. We must seek the latter rather in the

absence of apparent effort, and in the harmony of colour and form. You know how the slang of the day stigmatises some peculiarities of costume or manners as 'loud.' Now, nature is never 'loud': and you should eschew 'loud' architecture, regardless of the praises of fashion, which may offer you the empty satisfaction of the moment. If some startling peculiarity challenges your notice, regard it with distrust; for the mission of architecture is not to startle, but to satisfy.

Stability must be obvious.

With repose in architecture is associated stability. We must be satisfied of the one, before we can appreciate the other. To obtain stability in an artistic sense, a reserve of power is needed. It is not enough for us that a building stands. Our judgment must be satisfied that it ought to stand, and that it will go on standing. We must obtain on this head perfect satisfaction. It is the want of this confidence, which troubles us with so much of the iron constructions of the day. We see great spans covered or bridged. We look up at the roofs, and are glad to get from under them. Will they last? The engineer will tell us the tensile strain on an iron plate, and the number of inches of sectional area necessary by calculation, and assure us that the stress upon his roof is well within the calculated strength. It may be so: our judgment may be convinced, but not our artistic sense. The imagination is still unsatisfied; and we sigh for the works of architectural art, as to which no such questions intrude themselves, because the requirements of true architecture are effectually supplied. The Mediæval architects themselves were not always proof against the temptation of seeking to construct mere *tours de force*. Of such you may find an example in the Cathedral of Beauvais. Here the ambition of the architects to surpass what had previously been done led them to mistake bigness and daring construction for art. The spire has fallen, the roof gave way soon after its erection, and the nave arches have had to be strengthened by the insertion of intermediate columns, bisecting the original arches. Want of repose and stability are fatal to the artistic effect of the design, which deserves study, however, as an exaggeration and a warning.

To secure stability in architecture a margin of strength

is therefore required over and above the necessary demands of the moment. In actual professional practice this is not always easy to obtain; for great is the demand for cheapness of construction, and architects not only live to please, but must please to live. How many of our cathedrals would be left to us, if they had been built on a ninety-nine years' lease? To our shame be it said, there are few countries in which flimsy building is so much the rule as in our own. Low rents are more thought of than healthy homes. Thin walls and unsteady floors are regarded with indifference; and, if it were not for the great value of land in our large towns, would have even more serious consequences than they now involve. Happily for us, one evil goes some way to cure another. Houses (at least in London) are so closely packed that they sustain each other, and also aid their neighbours with their surplus heat. But without good solid building there can be no architecture worthy of the name, and you must ever be on your guard against flimsiness and instability. If you are stinted for money, prune your ornament with an unsparing hand; part, however regretfully, with your carving and your pet effects; better by far put your substance into your walls. They may at least reward you by good solid-looking reveals, with their effective shadows. At any rate, it is better to live in a substantial barn than in a flimsy palace, tottering to its fall.

Solidity as against pretentiousness.

I once heard a prominent civil engineer say that every railway station ought to be pulled down and rebuilt every ten years. The growth of traffic and of modern wants is rapid, and such structures are too often built for utility alone. Architecture, however, will not be satisfied with so brief an existence. It must aim at so much of permanence as it is permitted to mortals to attain; it must hand down the present to future ages, even as the past speaks continually to ourselves.

Do not believe that, in applying common sense to your architecture, you will necessarily injure its artistic effect. Such a creed would be an insult to your art, for it would imply that between it and common sense there is a gulf. This is not the case. Observe Nature once more. How simple and sensible is her construction! Look at a tree in

The simplicity of construction in Nature.

the full glory of summer verdure, with its weight resting on a single trunk. There is the type of the architectural column, utilitarian if you will, but also a truly artistic expedient for carrying weight. You will not find Nature placing the weight on the ground and the column in the air; nor will you see her shafts dotted about her structure as misapplied ornament. Here is an instance as to which we may fairly enough take a direct lesson from Nature, and remember that a column should have a reason for its existence.

Lessons of Nature to the architect.

The love of Nature, therefore, is good for the architect. It is good for him to be surrounded by beautiful things—refreshing to the eye, too much offended by its daily work among mean or commonplace objects. He can study the eternal principles of beauty, and ask himself how to apply them to his art. Amongst the works of God, he may cultivate simplicity of character and refinement of feeling, which will surely make themselves felt in his works; for you can only get from a man what there is in him. Descending from principles to details, he will know how to admire Nature's harmonies of colour, form, and proportion, which will put him on his guard against those conceits and extravagances which too often mar modern architectural designs. If he is at times tempted to rebel against the utilitarian side of our art, and to complain that he is made to serve tables, let him notice how wonderfully adapted are Nature's means to her ends. Take the hollow stalk of a bulrush, for example, where you have the application of least expenditure of material, in the form of greatest strength. However seemingly prodigal of her resources, Nature, while neglecting nothing, is never wasteful or inharmonious. She has lessons for all, and for none more than the architect.

Relation to humanity.

(II.) We have, however, to consider the other phases of his existence. An architect cannot be always indulging his taste for natural beauties. His art must lead him to the busy haunts of men, and there it will be chiefly exercised.

Growth of large towns.

The gregarious instincts of mankind have ever led them to assemble themselves in cities. In early times of unsettled government, the guarantee of mutual safety supplied an obvious motive; with us, the claims of business constitute an inducement of no less strength. You all know the won-

derful growth of London and other large towns, both here and in America.

Now this growth is but too often a matter of very mixed satisfaction. The architect has too few opportunities of guiding it, and mistakes are made which are irrevocable, and entail injurious consequences of more or less serious import. But it is not of much use to rail at great cities, as monsters and abominations. This world of ours, as it advances in years, must of necessity become more crowded, and men will congregate in cities, for powerful reasons, against which objections are impotent.

Plea against inconsiderate discontent.

I think we should be on our guard against falling too readily into a spirit of general discontent. This is a tendency to which our countrymen are, perhaps, somewhat specially prone. We see very clearly evils which are before us. This is a good thing, for it is the first step towards a remedy. But we do not always allow so readily for advantages, more or less counterbalancing the grievances, of which we complain. Thus, we are most of us painfully alive to the mischief of overcrowding in our large towns, but we may not always be aware of the gains, of various kinds, as well intellectual as physical, to be achieved by the power of association and co-operation.

We sometimes hear complaints that good honest work is more rare than formerly in this country, but this can scarcely be admitted. Thousands now demand to be supplied with articles for which hundreds were lately the customers. The few good things are still to be obtained, but they are merged in the sea of mediocrity, and the rising value of labour, in the present day, makes good work more and more costly. Nevertheless, it must not be readily conceded that man cannot do now what he once did; for, to grant this, would be to deprive us of all heart in our work. We must, as architects, accept the conditions under which our exertions are possible, and, however dispiriting the aspect of things external may at times appear, we may be sure there is a task for us to do, if we will but seek it, and that, seeking it, we shall find great objects to accomplish, and 'good in everything.'

Assuming, therefore, that large towns are a necessary con-

comitant of modern civilisation, what can architecture do for us in respect of them? Let us consider this.

Simpler conditions of ancient architecture.

In a simpler state of society the duties of the architect were necessarily simpler also. He had space and labour more at his command than at present. The urgent demands of sanitary science did not perplex him. He was more able to devote himself unreservedly to the æsthetic side of his calling. The traffic in the streets gave him little trouble in laying out the general plan of a town, if he were called on to do so, and he had definite traditions on which to proceed. With us it has become a necessity for the architect to combine with his art no inconsiderable amount of science, to guide him in the constructive or engineering portion of his duties.

The great architectural monuments of the past have been for the most part the work of the enlightened few—the rich and powerful who pressed architecture into their service. For their purposes grandeur was everything, and the beauties of architecture were valued by them as adding a fresh glory to their magnificence. The poor might live in hovels, provided there were splendid palaces and stately temples. We have now to take into account a different state of things. Great opportunities may hereafter occasionally arise for the architect; but, for the most part, he must prepare himself to take advantage of more numerous opportunities of smaller things, and in these Architecture will have to justify herself by combining beauty of art with a full recognition of utility.

Necessary union of the artistic and scientific elements.

Some have considered that there should be a complete separation between the æsthetic and scientific branches of our art. The adoption of this theory would lead to the employment on each architectural work of two authorities; and there would be no small risk of the dangers which wait on divided counsels. There would also, I think, be a tendency on the part of the architect, no longer controlled by constructional necessities, to drift into a dreamy unreality, opposed to the practical character of good architecture. We need not argue much upon the other aspect of this question, for our engineers have too often considered themselves free to disregard beauty, and we know the result.

Utilitarianism and beauty.

I do not think it would be a hopeful plan to release the architect from his constructional responsibilities, and it appears to me that the severance of architecture from engineering has been an artistic misfortune. It was not always so. The appearance of our public works was thought of, as well as their utility, in days not long gone by. You remember, I dare say, the discussions which arose not long ago about widening London Bridge. I must not plunge with you into the controversies which that discussion aroused: but I may notice in passing that each party to it expressed a high admiration for the design of the existing bridge. This was the work of Rennie, a distinguished engineer, and one not blind to architectural beauty. Now a bridge is primarily a utilitarian structure; but we may see, by this instance, that in such works there is scope for architectural art.

When it was built, iron was far from being as familiar to our constructors as a building material as it is at present, and, if we are to judge by recent practice, the days of stone bridges of large span are gone. We have seen Westminster and Blackfriars Bridges constructed of iron, and the railway engineers have adopted the same material for similar structures. However we may raise the question of respect for the work of Rennie, there is no doubt that those who lately proposed to use the readiest means of enlarging the bridge were but following the traditions of Mediæval times, when each new style turned impatiently from its predecessor, and Norman masonry was concealed without a scruple behind casings of later work. There can be little doubt that a Mediæval architect, engaged on a work which was mainly one of utility, would have used, as a matter of course, such materials as appeared to him most suitable and economical for the purpose in hand.

It is satisfactory to note the enthusiasm for the design of London Bridge, latent though it may long have been. Any such manifestation of public interest in our architecture is most welcome to the artist; but, while it is not desirable to discuss the merits of a contemporary design, it is allowable to point out that a respect for a work of yesterday may be pushed too far, if it is considered to forbid the applica-

tion to purposes of public convenience of the increased scientific knowledge which time has brought with it. Our interest in the art of the past gains much from our conviction that it was perfectly truthful, and that we may rely upon it as a complete exemplification of the practice and skill of the day. If our work is ever to be regarded with similar interest in the future, it must be founded upon similar principles.

Utilitarianism dominant in modern days.

As affecting the question of the separation of the architect's duty into two independent parts, it should not be forgotten that our greatest public works are likely to possess more or less of a utilitarian character. With the increased influence of the many on public affairs, we may expect to see greater attention paid to problems hitherto to some extent neglected. The time is past when the State, being the only patron of art, could employ it only to minister to its own magnificence.

If you will recall to your memory some of the principal London improvements of the last few years, you will understand my meaning. With the exception of some few public buildings, almost all the works of our time which have left an enduring mark on the face of the metropolis have been carried out by associations and companies distinct from the Imperial Government. We have been speaking about bridges. Of those over the Thames, I think Westminster Bridge is the only contribution of the State; Blackfriars Bridge has been rebuilt by the Corporation of London, and numerous iron bridges have been constructed by the railway companies. The Thames Embankment has been carried out by the Metropolitan Board of Works, who have also given us some valuable street improvements, besides a new system of drainage.

In these great undertakings there has been scope for architectural art, far wider and more important than private patrons could give. We have all of us an interest that considerations of artistic effect should not be merged in utilitarian exigencies. If the architect as an artist is to be separated from the architect as a constructor, I very much fear that it is the former who would go to the wall. To avoid this misfortune, I should deprecate a policy which

might lead to so disastrous a conclusion. It does not, of course, follow that an architect must of necessity be as great a master of all the newest modes of construction as an engineer now claims to be. The applications of special science are so varied and extensive that we must of necessity have need of experts to be called to our aid, as extraordinary circumstances may require.

To be accepted and harmonised with art.

It is a mistake to suppose that anything is so entirely utilitarian in its purpose that appearances may be neglected. Even sewer works require buildings and tower-like chimneys, which become landmarks. Our waterworks, beside similar requirements, may exercise the taste of their architect in bridges, inclosures, and the like. Railway stations may ornament or disfigure the quarter in which they are placed. River embankments give abundant opportunities to the architect, not only with regard to their own details, but also as to the larger question of building along their quays, and laying out the adjacent grounds to the greatest advantage.

In the interest of art we must not surrender all those opportunities. The public mind is, I think, more alive to them than it has been, and it is to be hoped that its interest will thrive and strengthen. But if the architect is to be able to claim and occupy his proper position, he must be prepared to link himself heartily with the improver. A mere dilettante application of favourite details will not be enough; he must enter into the spirit of the work to be done, and must be prepared to submit his ideas to the arbitrament of reason. Far from thinking there is any degradation of his art in such a course, he will have the happiness of feeling that he is assisting her to claim her highest glory, that of ministering to the public good.

We conclude, therefore, that the architect should remain, as he always has been, an artist and a constructor; that his mission is to design with beauty, to build with truth. If he can do these, he will find plenty of room for the exercise of his powers, even in these days, so often described as purely utilitarian.

Laying out of streets.

If allowed to advise from the first, he might prevent many an error, found afterwards (and too late) to be irre-

mediable. The planning of new streets, for example, is a matter of the gravest importance. The best laid-out thoroughfares in London are no doubt Regent-street and its accessories. They are well worthy of your consideration along the whole line from Charing Cross to Portland Place. They were, of course, designed before the traffic had become what it now is. The architecture of the houses is not in accordance with prevailing taste; but I am not asking you either to admire or criticise it. I do wish, however, to call your attention to the care and design shown by the general scheme, and we may remember with some satisfaction that it was the work of an architect. You may easily point a contrast if you will examine some more recent examples of new streets, with their unpleasant angles and unstudied curves. Such streets may be convenient, but they will never add to the beauty of our cities.

Squares.

In connection with streets, we naturally think of the squares and open places to which they lead. In their arrangement and adornment the architect may do much. No doubt the most agreeable sight to the urban pedestrian is verdure and flowers rather than formal architecture, but some formality is called for by the necessities of the case, and it may be effectively treated in various ways. I should be glad to see more of our open spaces planted than is now the case; Trafalgar Square, for example, where turf, evergreens, and flowers might encircle the fountains, and advantageously replace the dusty and heating asphalte. I think it was the late Professor Cockerell who pointed out that in arranging the streets leading to a square, it was better to let them enter the square a little way from the corners rather than at the corners themselves. In the former case the trees and shrubs in the square garden would be visible from the streets, and would form a pleasing break to the formal monotony which the other arrangement involves.

Height of buildings.

As to the height and sky-line of buildings also, architectural influence should be exerted. Some regulation seems to be called for as regards this important point; or I much fear we may drift into anarchy from the present rage for lofty buildings. I cannot doubt that the healthiness of

London, as compared with some other cities, has been much promoted by the circumstance that its buildings have been, as a rule, of moderate height. If every one is now to be at liberty to make of his house a Tower of Babel, it is much to be feared that the evils he may cause will not be architectural only.

The proper assignment of sites for our churches, theatres, and other public buildings has also to be studied. These should be isolated, and so placed as to command important thoroughfares. The width of streets and their gradients are, again, questions in which architects are interested. Precautions against fire and the important problems of construction raised by them must not be neglected, while the urgency of sanitary requirements which affect our architecture becomes daily more pressing.

Function of the architect.

Now I claim for architects as artists an influence in the solution of all those questions. A building may be beautiful in itself, and nevertheless a failure as to its effect, if it be badly placed, either by reason of its own site being unsuitable, or by the extravagant height or design of its neighbours. In the country these matters may perhaps be left to themselves; but in towns a certain amount of regulation is called for by the public interest. In respect of such regulation the architect has a right to speak.

All these subjects, besides others which will readily occur to you, affect necessarily the conditions under which our art can be exercised. To determine them rightly we must bring to their consideration a fair and candid recognition of the circumstances of each case, and a hearty sympathy with the work to be accomplished.

Architecture as an educating influence of the many.

The chief difficulties of the architect in dealing with the great mass of every-day work must always be financial, for, unfortunately for him, his art requires outlay, more or less considerable. As a consequence of this, there is always too much of a disposition to regard architecture as a luxury of the few. Against this tendency I protest. There is no satisfaction in accepting a position for our art so unworthy of her claims to instruct and gratify nations.

If, therefore, I am right in the view I have taken, we have to consider the tendencies of our times as they must

affect our practice of architecture; for if we either neglect them or place ourselves in needless opposition to them, we shall but beat the air, and the result must be the annihilation of the architect as an artist. We have been warned by no less an authority than Mr. Gladstone that the great deficiency of our technical education is a want of recognition of the claims of beauty. He has also pointed out the great changes now in progress in the value of labour. Our artisans, working with their hands, are daily bettering their condition. Our clerks, with their more intellectual labour, find themselves in danger of being left behind.

It is clear to me that Architecture can never be regarded in a higher sense than that of one of the many indulgences of the rich, unless she can address herself to the masses, and interest them in her work. How this is to be effected is the problem of the day. If the great artisan class of our country be really advancing in social condition and power, is it too much to hope that with more leisure and increased education will arise that love of beauty and art of which Mr. Gladstone has spoken? I know that there are those who laugh to scorn such suggestions, and declare that more prosperity means more idleness, and more wages mean more beer. I must decline, however, to accept such pessimist views. I have confidence in my countrymen, and am persuaded that they will know how to profit by the great opportunities which are now presenting themselves.

English taste.

But, it may be said, 'This is all very well, but Englishmen have no taste. The Latin race will always beat the Saxon in artistic aptitude.' This is a view which, in its superficial aspect, has much plausibility. In some of the applied arts our workmen have certainly been distanced, though even in these they have of late years done much to lessen their inferiority. It should be borne in mind, however, that, while foreign Governments have wisely thought it one of their most important duties to foster art, we in England have almost prided ourselves on a neglect which many of our most thoughtful statesmen now deplore.

But if in some instances we must admit deficiencies, and strain every nerve to supply them, I cannot allow that in architectural skill the Englishman has always shown him-

self inferior to his continental rivals. I am not speaking of the work of to-day. To do so would plunge us into a sea of divergent criticism, and raise that bugbear of our art—the 'Eastern Question' of architecture—the battle of the styles. I must contend, however, that there is nothing in our ancient architecture which should prepare us to accept a position of inferiority to other nations. Our cathedrals may be more contracted, and display some insular peculiarities (such as, for example, the small size of their doors), but they are as beautiful, both in construction and detail, as their continental rivals. Our village churches are unequalled, and we know, from the fragments of domestic work which remain to us, how fully beauty entered into the every-day work of our forefathers. I see no reason, therefore, to charge any of our difficulties on inherent artistic deficiencies.

We know 'how oft the sight of means to do ill deeds makes ill deeds done,' and the artistic sense soon becomes dull and weak in the presence of ugliness. Can we, therefore, who know the surrounding circumstances of the homes of the great majority of the population, wonder if there is need of the warning that beauty and science should dwell together?

The homes of the English artisan.

I am convinced that there is no reform of so pressing an importance in our day as the improvement of the homes of the million, and this is a question in the solution of which Architecture should have her share. The rapid rise of various great industries and the development of mineral wealth have congregated great masses together, with but little provision for moral or physical improvement. Other causes, no less potent, have affected the country homes of the labourers. Let us hope that this rich and powerful country will be able to rid herself of the reproach that a majority of her sons are unable to house themselves with comfort, or even with decency.

If our artisan class be, as I believe them to be, as intelligent as any in the world, it is for them to look to this. With increased wages, they are daily gaining power for social improvement, and will have less and less necessity for reliance on others. The pinch of present difficulty is felt, as Mr. Gladstone has said, by others rather than by

them. All the circumstances of the day are in their favour. The Legislature has lately given compulsory powers to their representatives for the purchase of sites, and the burden of educating their children is shared to a large extent by others. I should regard it as a most hopeful sign if we could see the great trade societies of our various industries uniting to answer the important inquiry of how to provide healthy, and I will add beautiful, homes for the peoples. I feel sure that, until this be done, our hopes of any great artistic advance among our workmen will be doomed to disappointment; for the eye which is debased by dirt and squalor at home, cannot shake off such depressing influences on its daily work.

I do not, moreover, see why such improved homes, as I have been speaking of, should be destitute of the graces of art, and I hope architects will not allow this to be the case. The artisan class, as a whole, is well able to pay for what it requires, and a taste, once implanted, is not easily eradicated. With the wants of the improvident and hopeless poor, who form so sad an element in the society of our large towns, I cannot now deal. It seems a cruel mockery to speak of architecture to classes whose first needs are those which spring from hunger and nakedness. This grave question is one for charity and well-considered benevolence to grapple with. It is not one to be profitably discussed here. The provision of healthy and artistic houses for our artisans is, however, a question with which society should be competent to deal, now that so many difficulties have been removed.

There can be no reason why these improvements should be of an eleemosynary character, or that the necessary arrangements should be so pared down that the new buildings should resemble prisons or union workhouses; without one sign of that homeliness which we all desire in our own houses. By the combination of many dwellings under one roof, or in large blocks, architecture may contrive to obtain beauties which would be unattainable on a smaller scale, besides being too costly for general adoption.

The homes of the middle class.

I have spoken thus far of artisans, who may be roughly described as those who live by skilled manual labour. To

them it only seems now necessary to speak of self-reliance and self-help. The rich can of course take good care of themselves, and make their influence felt in the architecture of our cities. There is, however, the great middle-class between these two, and it is in the attempt to supply the wants of its lower section that many difficulties will be found. A rising labour market means to this class dearer houses, becoming every day more cramped and depressing, in dull and monotonous ugliness. With ever-increasing anxieties in the battle of life, its little elegances give way before the more imperative calls of necessity, and an impetus is given to the production of all those shams, and cheap finery, which seek to pass off dross for gold.

How will all this affect our architecture? I fear that there is but one possible answer, if things are to remain as they are.

Much has been said of the advantages, to householders of moderate means, of having had dwellings constructed in flats in large buildings. Hitherto, however, little has been done in this direction, except for the two classes, at either end of our social system. The experiment of such buildings for those of whom I am now speaking, has yet to be tried, at least upon any large and sufficient scale. Accustomed as we are to a different system, the change is difficult, and attended with some disadvantages, which it is needless to dissemble. There are doubtless some objections to the flat system, such as its defective privacy, and the compulsory association, to a greater or less degree, of possibly discordant elements. But it may be pointed out that in the principle of association is almost the only hope of those whose wants we are now considering. Other circumstances being equal, a combined dwelling must offer economical and other advantages, which are becoming daily more difficult to obtain under the separate system.

The future of domestic architecture.

To architects belongs especially the study of this question, and I commend it therefore to your notice. The same principle of co-operation which has given us our palatial clubs, and which, still more recently, has cheapened to thousands the price of the necessaries and elegances of life, must, as it seems to me, be, sooner or later, applied to

our dwellings. The prospect is not without hope for the architect, and I advise him to qualify himself betimes for dealing with it.

We have seen a remarkable revival among our cultured classes for music and art. Never before have pictures, porcelain, or other artistic productions been more appreciated. Let us hope that our revival of architecture will not spend itself in our palaces and public buildings, but that it may extend to the homes of the poor, and the thousand wants of every-day life.

General conclusions.

(III.) And now it is time to bring to an end, this, I fear, too discursive lecture. Let us recall the conclusions at which we have arrived. First, we have seen that we may go to Nature for inspiration, not to carry out direct imitation, but to study her principles and modes of action. Let us ponder well on the mingled beauty and utility of her simplest productions. Let us learn from her simplicity and truthfulness. Armed with these principles, we go on to apply them to the practice of our art. We are not to seek to astonish by eccentricities; but, on the contrary, are to proceed to solve the problems submitted to us, with a taste chastened and controlled by common sense.

Having so prepared ourselves, we have to apply our knowledge for the good of others. If architecture, as a constructional art, leads us into the midst of great cities, with their often depressing associations, it is our duty to study carefully the conditions under which our art becomes available. We may often find at work below the surface causes of action, at first sight little expected, against which no efforts of ours will prevail. In such cases, we may guide, where we cannot drive, and may make the refining influence of art felt in movements, which owe their origin to social causes, far beyond our control.

If such things are difficult, the difficulty is only a reason for unflagging exertions. The architect must not give up a question because it is not easy to solve it, any more than a soldier may desert his post. His influence, properly exerted, will readily increase, and will spread upwards, as well as downwards. To render it effective, it is necessary to unite science with art, so that every one may be convinced, that in seeking

the graces of the one, he will not be called upon to surrender the solid advantages of the other. The architect must be chary of declaring that the requirements of convenience are not to be satisfied, out of regard to æsthetic considerations; he must rather consider it his task to reconcile the one with the other.

In our large towns, we have seen that he may find scope for his art in many ways—in laying out streets, devising improvements, and constructing bridges, as well as in planning separate structures. In his designs for the dwellings of all classes, he must keep steadily in view the requirements and circumstances of those who will be their inmates; and it must be his pride, not to force their habits into unison with his preconceived ideas of architectural propriety, but rather to apply his art to their necessities, and add a beauty to the exigencies of utility.

So shall architecture remain a living art, 'a thing of beauty, and a joy for ever,' the chosen companion of science, the handmaid of religion, and the pioneer of the social and moral improvement of the people.

LECTURE III.[1]

ARCHITECTURE IN THEORY: A MATTER OF PUBLIC INTEREST.

LAST year I had to commence my Lectures from this place by a mournful reference to our then recent artistic losses. Not only had the Royal Academy been deprived by death of its President, but architecture had specially to deplore the additional loss of a most distinguished representative in Sir Gilbert Scott. He had passed away in the height of his fame, active in work, and full of honours, so that he may be said to have died in harness.

As Professor of Architecture he had examined the rise and progress of Mediæval architecture, in a series of admirable discourses, which have since been published. It seemed right, therefore, that your attention should also be directed to other developments of our art, and we discussed in consequence the remarkable movement in Italy in the fifteenth and sixteenth centuries, in favour of a return to Classical art. In so doing, the works of the chief architects of the time came under review, and notably those of Brunelleschi, Sansovino, and Palladio, which we associate in a special manner with the first, second, and third stages of the Italian Renaissance.[2]

I do not, however, at this time desire to proceed to the examination of its achievements in the later days of the movement; but I propose, in the present Lecture, to confine our attention to architecture in theory, as a matter of public in-

[1] Delivered (at the opening of the Series of 1880) on January 8, 1880. It will be found to touch on some of the topics already considered in Lecture I.; but with less of theoretical completeness and more of detailed illustration.

[2] See the concluding Lectures of the Second Course.

terest, having an important social mission, and being even an element of national greatness. To arouse and sustain such interest is, indeed, the main object I have in view. It is not possible or desirable to enter here into the details which every architect, indeed, ought to learn, but which he can acquire more efficiently in our schools, in the architect's office, in the workshop, and in actual practice. Lectures will not make architects; but they may, perhaps, be useful in encouraging a love for the art, not only in those who desire to live by it as a profession, but also in that much larger class which is willing to take an intelligent interest in its welfare.

Relation of architecture to other arts.

(I.) In the latter category I reckon, as a matter of course, all the students of this Academy, whether painters or sculptors. To bring all the resources of art to bear in their integrity on the production of a perfect work should ever be the aim of the architect, and this he cannot hope to realise without the invaluable aid of the painter and the sculptor. One of his first objects, therefore, must be to interest his brother artists in his work, for without such interest there can be little prospect of really effective co-operation—a co-operation which may sometimes even involve constraint and sacrifice, a readiness to sink the doer in the thing done. And if the architect ought to be ever ready to admit his obligations to the sister arts, so that they should have no more earnest supporter than himself, it should be remembered that he can give as well as take.

Architecture has been called the mother of the arts, and, as men must be housed as a matter of primary necessity, she can at least claim precedence in regard of time. While painting can depict existing or imaginary effects, architecture can create them. A picture or a statue, however famous, occupies but a small space, whereas Architecture has grandeur, proportion, and the power of association, as handmaids at her call. If painting can give variety and contrast of form and colour, so can architecture; if sculpture claim an ideal refinement, and an exquisite balance of parts, as its own, architecture is able to assimilate all these charms, and to offer them a home; and the casket may sometimes be more beautiful than the jewels, the shrine than its inclosed treasures.

Many reasons will, I doubt not, commend themselves to a thoughtful mind, why students in architecture, painting, and sculpture should regard themselves as possessing a common heritage, and devoted to a common aim. The special work of the architect demands, it is true, a supplementary technical training, over and above the lessons he may learn here, and in the economy of life he must devote a portion of his time to other things than that single-minded worship of the beautiful in art, which he is at times ready to envy in his more fortunate fellow-students. The latter will, however, give credit to him for a spirit sympathetic with their own; and when they look abroad, and see the masterpieces in which successive generations have delighted, they will not be slow to allow the full claims of architecture as a fine art. They will not allow themselves to be tempted to think their architect friends too mechanical, because bent on drawing with exactitude, not only with the free hand, but also with rule and compass; for they will see clearly that the spirit of an artist may exist, even among straight lines and geometrical forms.

I assume, therefore, that architecture cannot be a matter of indifference to any follower of art.

Its value for general artistic culture.

Nor should it, indeed, be so in any cultivated society of civilised men. If a taste for art be a sign of refinement—a proof of the value of that 'sweetness and light' of which we hear so much now-a-days—Architecture cannot well be set aside; nor, indeed, can her claims be based on this narrow ground alone. Surrounding the cultivated minority is a vast constituency, a nation of workers, of hewers of wood and drawers of water. To them is denied the enjoyment of pictures and statuary, excepting so far as these may be provided by special private liberality, or by the stinted efforts of an Exchequer, ever grudging where art is concerned. A noble building, however, such as a grand cathedral, is in their midst. It cannot be hidden. It is a possession in which all have their share, and it is difficult to over-estimate the educational effect of noble architecture. Our art is, therefore, a natural teacher, and even in these days may help to prepare the soil for the reception of that artistic seed, the importance of which I hope and believe is being gradually,

if too slowly, recognised by those who regard the commercial prospects of our country with anxiety.

The teachings of antiquity through it.

Passing onwards to another class of reasons for our claims on behalf of architecture, can we forget the associations with which it is surrounded? What student of history can afford to pass it by? When we enter one of the great monuments of olden time, it is the Past which speaks to us, to excite in some of us, it may be, a burning desire to explore its hidden recesses, and live, as far as may be possible, amongst its ruins; while, in others, it may serve as an encouragement to go forward, to nerve ourselves against the difficulties of modern days, to do our little best in our own generation. In all cases the retrospect has much to teach—respect for the great things that have been achieved with opportunities inferior to our own—the old, old lesson of the vanity of human things—and, above all, the modesty as to his own doings which should characterise the true artist.

In all these things we find architecture again a teacher, and this time of morals, as well as art, appealing not to the senses only, but also to some of the noblest instincts of humanity.

In an old country, we do not perhaps always prize as we ought the precious relics of the past, not being fully conscious of the advantages derived from their possession. To do so, we must picture to ourselves the newness of a vast continent, such as the United States of America, full of life and energy, of incessant occupation and bustling prosperity. I have myself never visited America, but those who have done so have dwelt on the painful void caused by the absence of an architectural Past. And not they alone: Americans are the first to appreciate the advantages of Old England in this respect. They visit our cathedrals, they explore our old cities, they do homage at the shrines of great men, in whose reputation they claim a share, as descendants of a common stock.

Architecture brings home to us, then, the value of antiquity, and causes us to recognise its influence as a factor in education. The high pressure of modernism is about and around us. Hurry your work—spare yourself all unnecessary trouble—haste to get rich—are the precepts which it en-

forces, and against which our art is a standing protest, and a mute yet eloquent witness. The great architects of the world have worked on principles widely different from these. Sinking the artist in his work, the grandeur and perfection of the design was the object at which they aimed—not whether by compression and mutilation cost could be kept within some paltry calculation—not whether by any means completion could be secured within the narrow span of a human life. Trouble and pains were not to be grudged in carrying out a great architectural monument. Can we doubt this, when we inspect the highly finished details of ancient work, some of which no ordinary eye can see, but all executed as a labour of love, the outcome of a feeling that nothing can be too good?

The sacredness of ancient monuments.

(II.) To the evidences of such a spirit as this, as well as to their historical associations, ancient architectural remains owe much of their value; and for this reason, even apart from considerations of beauty, the world has agreed to regard them as heirlooms, to be cherished and treated tenderly as regards those reparations, which, in common with all human works, they may require to ward off decay and ruin.

St. Mark's, Venice.

Art is cosmopolitan; it refuses to be bound by national divisions; it speaks to humanity a universal language; nothing of human interest is foreign to its care. We all remember, I dare say, the excitement lately produced by a report that it was intended to interfere unnecessarily with St. Mark's, Venice, and the susceptibility shown by some writers in Italian newspapers as to the expressions of feeling in this country, which, to them, seemed an unwarrantable interference of strangers. This was, surely, an exaggerated sentiment; and those who live under the shadow of St. Peter's and the Vatican, might have been expected to remember that the term Catholic, which in religion expresses but an aspiration, represents a truth and a reality in respect of art. Far from repelling any manifestation of solicitude, it seems to me that all who have the interests of architecture at heart should be the first to welcome any proof that its treasures are appreciated, not only in the country of their origin, but also in distant lands, and that a jealous love of its historic masterpieces is coextensive with the civilised world.

Temple Bar.

It is not, however, altogether unnatural that men who care more, perhaps, for politics than architecture, should resent the advice of foreigners on matters which they consider of mere domestic concern; and it has been asked whether we should be disposed to tolerate suggestions to ourselves based upon a similar principle; while the recent destruction of Temple Bar (which I for one regret) has been referred to as an instance of recent vandalism on the part of Englishmen. In reply I would say that the conservative architect would, in many cases, be only too glad to have his hands strengthened by well-considered remonstrances, from whatever quarter, against unnecessary tampering with our ancient monuments; though the suggestion of the particular comparison in the present case does not perhaps lead us to repose any special confidence in those who can class St. Mark's and Temple Bar together, as if of equal artistic value. Nevertheless, it may not unfairly be remembered that the test of the strength of a conviction is the willingness to make sacrifices for it; and it may be asked why Temple Bar was sacrificed at the cost of its various historical associations. It would not have been impossible to have retained the structure, while widening the streets around it. This, however, would have cost money, and so the easier course was adopted of removing an ancient landmark and carting away its stones as old materials.

The Taj-Mahal at Agra.

I fear this is not the only instance in which our actions afford a mark for criticism in reference to either omission or commission. Our English buildings, with their many beauties, have in few cases a foreign reputation wide enough to arouse abroad any warm interest in their favour; though we all know the feeling that has been excited among ourselves (not always perhaps manifested very wisely) against unnecessary innovation and destruction of historical interest, under the colour of needful repair. There are some monuments, however, in the charge of Englishmen, which may compare perhaps with St. Mark's at Venice. Such a structure is the famous Taj-Mahal at Agra. It has often been described as one of the wonders of the world, a vision of loveliness, and a rare illustration of perfection of architectural art. The Taj is in the care of our own Government; and a recent traveller,

while admitting that it is well kept at present, thinks it necessary to utter frequent and emphatic warnings against English doings in India, under the name of restoration.

The Dewan-i-am.

I find in Mr. Val. C. Prinsep's interesting book of 'Imperial India,' the following reference to another monument at Agra, the Dewan-i-am. After describing its splendours as 'fit indeed for a king,' and even now displaying themselves in singular beauty in their faded form, he energetically exclaims, 'Alas! the hand of the English engineer has been here,—what a sight!—the most tinselly gold, the crudest reds and yellows, the coarsest possible work. If this is what it was when new, let us have no more like it; let us at least leave what is picturesque and beautiful to delight the eye as long as there remains a trace of the pattern. Let us keep up the building and keep out the rain. But, for heaven's sake, O ye higher powers who direct such matters! spare us the decorations of the unartistic, and the wild imaginings of the engineer, which are not only horrible in themselves, but replace the traces, the beautiful traces, of former art.' We should, I think, be grateful to a member of this body for this and other outspoken warnings, and that they are needed may, I fear, be assumed from the note which the author appends to the above passage, to the effect that he heard a high official asking triumphantly if the work, thus denounced, was not 'very fine.'

The Dewan-i-Khas.

At Delhi, Mr. Prinsep refers to another building, the Dewan-i-Khas, as the most beautiful thing he had then seen (before visiting the Taj). Here, he says, there had been 'a few restorations, in awful colours, made for the ball given to the Prince of Wales, and, alas! many mutilations.' Again, his wrath rises against the military guardians; for, he adds, 'a real artist would have touched without repainting. Here, of course, the engineers advise, and "fools rush in where angels fear to tread."'

The duties of Government on these points.

It would seem, from these remarks and others like them, that the Indian Government already possesses that immunity from architectural advice which has been desired by certain authorities among ourselves, and has even been made in England a foundation of departmental policy. The care of delicate architectural monuments is not, however, the natural

duty of a military profession, however highly educated and illustrious. Architects prefer no claim to advise in respect of bastions, fortifications, or the many scientific details of military engineering. They may, therefore, without risk of misconstruction, agree with Mr. Prinsep in thinking that artistic training is a valuable quality for those who have the care of architectural treasures, and might possibly have avoided some of the harm which he deplores.

In former times, the English rulers of India, immersed in the serious and all-absorbing responsibilities of empire, did but imitate the indifference to architecture which prevailed at home—an indifference which endowed London with the dismal dreariness of Bloomsbury—an indifference which concealed the fabrics of our churches with plaster, and choked the space which should have been available for worshippers with the cumbrous galleries, and hideous structures, which certain so-called protectors of ancient monuments would still retain as historical. Now, however, it may be hoped that a better spirit prevails, both at home and abroad, and comments like these of an artist, uttered out of the fulness of the heart, may be acceptable to strengthen the hands of those who desire that English rule in India should conduce in all respects to the welfare of its inhabitants.

Acting on this principle, architects may join in pleading for an intelligent conservatism in the interest not only of art, but of those historical associations dear to all persons of knowledge and refinement.

The claims of utilitarianism.

(III.) Historical associations, however, even when combined with beauty, are but little regarded, if they clash with utility. Architecture cannot allow this antagonism. Her mission as an art is to wed science, and to work in a loving partnership. The most beautiful examples of our art are also those which fulfil most completely the requirements of their origin. The Parthenon is not only the perfection of refined architecture, but also a temple of worship, admirably adapted to the purposes intended by its builders. The Taj at Agra is a building designed in strict accordance with the requirements of the Mahometan religion and worship.

In the history of the world we find various tendencies

prevailing at different epochs. Thus, in what we call the dark ages, may be seen the results of a spirit of feudalism and deference to authority, which, pushed to extreme, develops despotism and superstition. At the time of the Renaissance, we come upon an age of freedom, not without its drawbacks and excesses, which has asserted the right of inquiry, thus giving scope to individual intelligence, and, in the place of passive submission, has established the duty of seeking to insure the happiness of the greatest number. In like manner, our own time has had its characteristic distinction, and may, I think, be called the mechanical age. As a result of this development, the engineering and utilitarian element in our public works has assumed an exaggerated importance, and the question has arisen whether the quality of usefulness be not inconsistent with beauty in architecture.

Its present rapid development.

The remarkable advance made of late years in the practical application of science has, perhaps, tended for a time to obscure the claims of art. Demands arose early in the present century for railways, docks, and other works of public utility, which architects were not forward to satisfy, and so engineers stepped to the front. These men have girdled the earth with iron, have improved communications by sea as well as land, and have found conspicuous success in their noble task of subduing the elements of nature—earth, air, fire, and water—and applying them to the service of man. It is marvellous to reflect on the work of a single generation in these matters. The achievements of science have, indeed, been so remarkable, that it is difficult to imagine similar progress in the future as within the bounds of possibility. It might almost seem that the wants of mankind had been accumulating for generations, like some rivulet fed by a variety of streams, until at last it bursts with the force of a torrent over all intervening obstacles.

Such considerations should, I think, be borne in mind, when we hear laments on the utilitarianism of our age. We are apt to be impatient, expecting cause to be at once followed by effect; forgetting that, though for a time some special faculty of the intellect may develop an abnormal activity, the inner aspirations of man remain unaltered and

unalterable. These can never be satisfied with mere mechanical triumphs. They seek to penetrate into the deeper and unseen mysteries of the soul, and in these regions art will find a place.

Its need of alliance with art.

One of our leading engineers spoke but lately, at the Institute of Architects, on the interdependence of the two professions, which he hoped would ever be in friendly accord. 'The times and circumstances,' he said, 'are past when a man can be great as an engineer, and great as an architect, as were the few old Italian giants; but the time is not, and never can be, when a man can be a good architect without some knowledge of engineering, or a good engineer without some knowledge of architecture.'

It is scarcely necessary, perhaps, to go to Italy for examples of the combination here advocated, for in many of our English buildings we have proofs of constructional skill to show that our own architects have been both artists and constructors. Surely in these later days architects will not flinch from similar trials, and allow their art to separate itself from the life of their day, until it becomes a luxury rather than a need, and repels the man who demands a reason for his faith, in favour of the æstheticism, pure and simple, of the dreamy *dilettante*. Society, while it will never give up the use of the enlarged powers which science has taught it to exercise, has nevertheless need of art; and so, amidst all the pressure of a so-called utilitarian age, Architecture is still a teacher, and alone among the Fine Arts can bring her chastening influence to bear directly on the great works of our age. The arts of painting and sculpture appeal in the absence of public encouragement to a more limited circle. Their works may delight their fortunate possessors in their own private galleries, but the public out-of-doors has no share in the enjoyment. While, in this country at least, painters and sculptors spend their lives chiefly in working for private patrons, the architect's doings are necessarily a matter of some public interest. Buildings of importance cannot be overlooked, and, for whatever purpose erected, must have an influence on the general taste. Consider, for example, the palaces of Venice. Not many of them are public buildings. Constructed for individuals, and for private occupa-

tion, they line the watery highways of the silent city, and produce an unrivalled architectural effect, the enjoyment of which belongs to the humblest Venetian, as much as to their patrician owners.

Art and mechanical production.

But to return to the claims of architecture on public consideration. We hear often of the difficulties of art in presence of the spread of machinery, and the consequent increase of mechanical execution of things made formerly by hand. We all remember Mr. Ruskin's denunciations of machine-made ornament. More recently our distinguished member, Mr. Poynter, has dealt with the same question, in treating of the influence of art on social life, and his view is, if possible, even more desponding. He has stated that we must not delude ourselves into the belief that we can produce works of art by the substitution of machinery for hand labour, or that the decoration of objects of common utility by a mechanical process can ever have any artistic value. This question is too large to be more than alluded to at the end of a lecture, and might lead to discussions on political economy rather than of art. It must, however, be clear to us all, that the world will never give up a system, which by cheapening productions serves the wants of the many, even at some cost to the artistic cravings of the few. Mr. Poynter sees this clearly; for, after allusions to the moral causes of the modern system of manufacture, he says, 'If we ask, then, is the return to such a state of things,' as once existed, 'possible, or, to put it more fairly, is the return to the time when every workman was also an artist, possible? I answer, that under existing social conditions it is impossible.'

Art in manufacture—Wedgwood.

I am not prepared to say that these discouraging assertions, though true in the main, are not brought forward with too little qualification; and no one, I think, can shut his eyes to the improved taste shown of late years in many of our manufactures—as, for example, in plastic and textile fabrics, and in wall papers, the course of trade in which has been turned by the advance made by the designers of English goods. In pottery especially, beauty and fitness have been studied in this country with remarkable success; and we all know the fame of Josiah Wedgwood. A poor potter, deprived at an early age of one leg by amputation, rendered necessary

by the consequences of small-pox, this poor unlettered boy was destined to cause a revolution in the trade of the English potteries. Beginning, as all must do, with the conviction that the foundation of all art is in true and honest workmanship, he first devoted himself to improve the material with which he worked, so as to fit it for the most perfect and enduring outlines, and the most delicate surface and texture. With no advantages of education, his inborn taste led him to appreciate the beauty of Etruscan and Greek forms of art, and to them he turned for guidance, copying vases, cups, urns, and other relics, as he could obtain them, with much difficulty, by loan or otherwise. He sought the aid of Flaxman to make designs for the forms and decoration of his work. In the triumph which ultimately crowned his efforts, we may, perhaps, find some encouragement. The sense of the beautiful, so strong in Wedgwood, may yet nerve its possessors to battle manfully against circumstances not certainly more dispiriting than those which his energy and perseverance encountered with success; and we may, I think, be glad that, owing chiefly to the enlightened action of the late Prince Consort, museums now exist at South Kensington and elsewhere, to which future Wedgwoods may repair for observation and study, while classes are open to such students at small cost, conducted by artists of eminence and other competent teachers.

Modern growth of uniformity.

Notwithstanding all such laudable efforts, however, it is, of course, impossible not to admit that the mechanical perfection of modern manufactures has a tendency to sink art in a dead uniformity of machine-like production. The very principle of division of labour, on which reliance is placed, must deprive the workman of interest in his work, so that he may tend to become himself almost as much a machine as that which he has to guide. Nay, in society itself similar causes are at work, and, as civilisation advances, individual characteristics are more and more lost in the action of masses, just as the picturesque and rich dresses of former times have given way to the sombre and uniform suit of black of the modern civilian. We lament this universal tendency to a dull uniformity, affecting both art and manners; and yet to with-

stand it effectually in these modern days is, we are told, virtually impossible.

Not dominant in architectural design or workmanship.

We may claim, however, for Architecture that with her it is not impossible; and that, although our town builders have afflicted us with mean designs, all alike and carried out by hundreds, architecture as a fine art has had nothing to do with such manufacture. The great public buildings of a country can never be constructed as if cast in a mould. Each must declare the special purpose for which it has been designed, whether it be a palace or a jail, a church or a theatre.

Moreover, if the design of the architect must have an individual character, the same may be said of the handiwork employed for its realisation. Machinery, as applied to architecture, can never supersede the necessity of reliance on the intelligence of the workman. It may be used, and rightly used, for diminution of distressing toil, such as carrying heavy materials to a great height; but what machinery will supply the place of the skilled mason or carver, say in setting out the stones of a groined roof or decorating its bosses? Setting aside such manufacture of houses as I have mentioned as no architecture at all, you will find none of its examples exactly resembling each other. Even in Mediæval churches and cathedrals, although built in the same style and for the same purpose, there is ever difference and variety; and though Greek temples resemble each other more than any other specimens of our art, they are still not exactly alike. The charm of workmanship, therefore, which has been lost in so much else, still belongs to architecture. Over and above the beauty of the design, there is scope for the individuality of the workman, shown, it may be, by those accidental irregularities which distinguish all hand-made work from mechanical reproduction.

Duties of trade unions.

(IV.) No true friend, however, of modern English workingmen will delude them with the idea that their handiwork will ever equal, in artistic value, that of preceding ages, unless each man will do his best, and unless the great trade societies will adopt as a maxim to rule their daily work, 'Whatsoever thy hand findeth to do, do it with thy might.' This is the lesson I should like to see taught to the rising genera-

tion of artificers. I would have it learnt by them as from friends; for what are called the working classes have no better friend than the architect. His interests, rightly considered, are the same as theirs, for he desires to raise the standard of workmanship, and to develop the intelligence and skill of the worker. Bad must it be for art, bad for the workmen, bad for society at large, if such efforts are to be thwarted by combinations which jealously limit excellence, and discourage the efforts of genius to rise above the average.

Duties of Government.

If our artisans do not always appear generally to add to their confessed mechanical pre-eminence those gifts which we class under the general head of taste, in the same degree as some of their foreign competitors, we must not, as a matter of course, hastily assume national inferiority, but may profitably inquire as to the steps taken by Governments and those who have influence and power to recognise art, to develop taste, and to reward its possessors. In the meantime, our ancient edifices stand before us as a witness in the cause of art, an irrefragable proof that beauty can coexist with utility, science with grace. Architecture can, as we have seen, exert no inconsiderable effect on the artistic education of the community, and, as this is a matter of general and not sectional interest, may we not ask that the influence of the State should be exerted to encourage and extend it?

We have lately seen a depressed Commerce, uneasy at foreign competition, turn to various quarters for help—a help perhaps only to be satisfactorily obtained by means of a thorough technical education, in which art, standing on a firm basis of sound and honest workmanship, should have a leading part. The Indian Government has taken a forward step by giving that artistic commission to which we owe the interesting account of 'Imperial India,' from which I have already quoted; and Mr. Prinsep's delineation of the most important event of our Indian history will doubtless interest thousands, both in the present and in the future. Why, however, should India alone be thus favoured, while our own national buildings are left bare and undecorated with pictorial art?

Why, for example, should our Houses of Parliament display, year after year, empty panels intended for historical

pictures, but now covered only by the paperhanger, while empty pedestals abound for which no statues are forthcoming? The erection of this building was hailed by all lovers of art as a great opportunity. Good intentions were announced, great designs invited and encouraged; and while the late Prince Consort was alive, progress was made under his fostering care, seconded by the action of a former President of the Royal Academy.

Decadence of the 'Royal Commission' of Fine Art.

Now all seems to be forgotten. No Royal Commission exerts itself in the direction of art, and the battles between the 'ins' and the 'outs' are far too engrossing to leave room for its consideration. If, however, artistic progress be really a matter of public interest, may we not hope some day to witness a renewal of intention and activity, some angel's stir in the dull pool of apathy? Artistic schemes for the public advantage, supported by the highest authorities, will surely not be allowed to remain indefinitely in abeyance, and perhaps a day may come when others—possibly within the circle of the same Royal House—will take up the congenial task, which only dropped from dying hands.

In the meantime, it is certainly not in Italy alone that statesmen need to be reminded that art may claim a hearing even in the clash of politics. The Royal Academy has seen its way to address a foreign Government on a question of general artistic interest, and similar matters nearer home may possibly plead hereafter for equal consideration. Will it be unreasonable to urge upon our rulers that art is really a matter of public importance, and worthy of a share of the fostering care of the State so freely accorded in a neighbouring land? Is it not time that artists should declare that they represent no unimportant part of a healthy national life? Would it not be well for our public men to cease to regard art as an extravagance to be repressed, lest it should give rise to calls on the public purse, which is readily filled at will whenever their policy requires it, but is always empty when Art prefers her claims?

Want of public grants and responsible ministers.

I see that last year the French Fine Arts Budget included a vote of 220,000*l.* for purposes connected with art. Of this amount no less than 30,000*l.* were to be devoted to the purchase of pictures and sculpture designed to decorate

the public edifices, while 60,000*l.* were to be expended in the preservation of public monuments, and 18,000*l.* were appropriated to the French Academy at Rome, and the National School of Fine Arts. In this country it would, no doubt, be hopeless to expect at present to have a Ministry of Fine Arts; but the Minister responsible for public artistic matters might at least be a member of the Cabinet, with some power of initiative and independence of action. In that case, great public works of admitted necessity would not perhaps be mutilated and starved in execution, or be indefinitely postponed, by reason of an asserted want of means. Perhaps it would be found possible to invest annually some sum, equal to a small fraction of the cost of an iron-clad, in commissioning works of art for the decoration of public property. It might at the same time be found unnecessary to entrust the architecture of public buildings to the clerks of a subordinate department, instead of enlisting the highest talent of the day in the service of the country. Our great national edifices under such a system might assume a new aspect, and no longer proclaim, by their barrenness of artistic completeness, that they are the work of those who began to build, but were not able to finish.

Conclusion. Capacities and hopes of architecture.

I trust that I may have led you to agree with me that Architecture has claims on the attention of civilised society, not only as the gratification of a sense, still less as a mere æsthetic plaything, but as a serious object of enlightened national policy. In asserting this position, she urges not her individual rights alone: for in painting and sculpture she recognises her truest allies, and with them she desires to advance.

Our buildings should glow with the colour of pictorial art, and give opportunities to the sculptor to elevate the public taste. In this way, art would become again a great educator—a source of popular delight—a part of the daily life of the people. In this mechanical age architecture would serve as an artistic rallying-point, while ever holding aloft the banner of progress. Delighting the seekers of the beautiful, she would appeal also to all who, for whatever reasons, value the teachings of a great historical past. To these our ancient buildings, guarded with a reverent care,

speak with a force denied to the greatest orator; for they address us with a quiet dignity—a melancholy pathos—not to be attained by a living voice.

Architecture, however, is no recluse. She sits not apart, wrapped in a mantle of refined exclusiveness, but mingles with the throng of men, and delights to serve their needs. Her structures have a *raison d'être*, and are erected for use as well as for artistic display. No social problem is foreign to the province of the architect, for he knows that his art should be an expression of the wants of his age and country. If, in common with other artists, he be at times discouraged by the utilitarianism which seems to abound around him, he is not, like them, bound to treat it as an uncompromising foe, but rather as an estranged friend, to be won over once again by conciliation and skill. Convinced that the march of science will ever be onward, he will hasten to take the position in the ranks, which is appropriate to the professor of an art necessarily based on science.

In conclusion, we may be sure that art will hold its own. Men are not machines, to be content with the supply of their material necessities alone. The inner workings of the spirit cannot be weighed, seen, or handled. The great emotional instincts of mankind, which have made history, have not been crushed out by the monotonous pressure of the steam engine. The passions and emotions of human nature are ever the same. Love of country, loyalty, religion, still move the soul as they did when the world was young, and with them may be associated the craving for beauty in art—an art which may shed a ray of lustre on laborious lives, and may make men happier and better.

We have lately been told in eloquent words by our accomplished President, when presenting prizes to students, that he believes that art was never pursued with more earnestness than at the present time. Ought not such a power to be utilised for the general good, bringing art to supplement the deficiencies which stand confessed in nineteenth-century life?

Architecture, at any rate, need not despair. Born of the necessities of man, appealing at one moment to his highest artistic instincts, at another to the requirements of utility,

and always possessing historical and archæological interest, denied, to a great extent, to the sister arts, Architecture can never die.

Let us hope that, in the future, she may show herself, as in the past, a worthy leader in the great cause of progress; and thus maintain and justify the position claimed for her of being, in no ordinary sense of the words—a matter of public interest.

LECTURE IV.[1]

ARCHITECTURE A FINE ART AND ALSO AN ART OF UTILITY.

General considerations.

(I.) In pursuance of the plan indicated in my last lecture, I now propose to carry a stage further the investigation into some of the principles which, as it seems to me, have governed our art in the past, and must continue to do so now, and in the future, if Architecture is to retain that high position amongst men which I have claimed for her.

Peculiarities of Architecture as contrasted with other arts.

We have seen, on former occasions, that though Architecture must be ranked amongst the fine arts, she has yet certain inherent peculiarities of her own, which give her a separate status from Painting and Sculpture, to say nothing of Music. Not only are the beauties of architecture independent of resemblance to nature, but they are to a great extent directly opposed to such resemblance. Having dealt with this question in a former lecture,[2] I will not again go through the comparisons between nature and architecture which support the above conclusion. I may remind you, however, that while we then found the charms of nature to include infinite variety, motion, and change; in architecture, on the other hand, we seek symmetry, stability, and permanence. The painter and the sculptor may refer to nature for direct inspiration: but the architect must be contented to be guided by rules and principles which forbid direct imitation of natural forms.

Architecture has, moreover, a definite object, over and above that of giving pleasure. She has to serve the needs of man, and is therefore a useful art, as well as a fine art. The fire of artistic inspiration may cause the painter to produce works of pure art, because he can no more help doing so

[1] Delivered Jan. 15, 1880. [2] See Lecture II.

than he can help breathing the air of life. He can pour out his soul on canvas, no one interposing, either to encourage or forbid. The architect, full of similar love for his own art, and equalling, it may be, his brother artist in ardour, must bide his time, and await an external summons. It does not rest with himself to proclaim his power, for he cannot build that for which there is not a previous demand. In other words, architecture, if it were not a useful art, would cease to exist as an art at all.

Connection of its utility with its progressiveness.

In arts depending directly on imitation of nature, it is difficult to see how any future advance can be made. A great genius in art can but illumine, with a flash of divine light, that which already exists. The glories of painting and sculpture do not admit of indefinite extension, for they appeal simply to Nature—a Nature ever the same, in modern as in ancient days.

Architectural art, however, stands on a different basis, not so free, not so spontaneous, not so joyous; but, on the other hand, more solid, and with an indefinite future of promise. Her mission being to supply the wants of man, she may hope to fulfil that mission better, as the accretions of knowledge accumulate, while years roll on. The tendencies of our own mechanical and utilitarian age, while they display much to discourage, yet leave something to hope for the architectural student. They who delight to employ the intellect in subduing the forces of nature to the service of man, are at least proceeding in the same direction as those who, like architects, claim to practise a useful art, and who may even look for an ally in that science of utility, which, to some despondent minds, has seemed to set the seal on a hopeless decadence of art.

Architecture need not, consequently, disdain the title of a useful art—an art of reason, as well as of imagination—an art which, while giving scope to the highest artistic sensibility, must nevertheless be based on judgment and common sense.

Harmony of beauty with utility.

To the function of reason the architect adds that of imagination, without which he can have no claim to the name of artist. He has to combine novelty and originality with acknowledged rules, and to meet the actual requirements of each case,

and, when this has been done successfully, his achievements may then, and only then, claim the title of a work of art, as well as a work of utility.

The savage first decorates his weapons, canoes, and pipes, or tattooes his body. He then turns his attention to building, and a tent becomes a wigwam, and a wigwam a house. Amplification turns the house into a palace, and religion, as it becomes formulated, requires a shrine or temple for its ceremonies. All these successive advances are based upon the requirements of actual use, and so architecture becomes an art of decorated utility. The Greek temple and the Gothic cathedral thus follow the same law, and much of their charm is produced on the mind by the illustration they afford of a perfect adaptation of graceful means to a utilitarian end. It is by serving noble purposes, that architecture becomes itself ennobled, and, not contented with a primacy among the useful arts alone, claims to rank with the imitative arts of painting and sculpture; which, unlike itself, can express ideas by the mere action of the artist, speaking out to us the message that is in him, without a thought of any other necessity than that which is laid upon him by the consciousness which forces him onward.

Prohibition of mere imitation of the past.

The connection between architecture and utility, having always existed, gives a practical answer to the doubts which are sometimes felt as to its influence in the future. Rightly considered, such a connection is natural, and to be cherished. Take the question of imitation. We know there is always some fashion in art in these days, which have no style of their own. Public taste may one day turn to Greece, at another to Rome. It may declare the supremacy of Gothic, or discover the merits of 'Queen Anne.' Now, if we are convinced that architecture must be based upon utility, any direct imitation of ancient models will be recognised as unreasonable and inartistic. We do not want, for example, our Christian churches to resemble heathen temples, however well copied from beautiful designs. The charms of these flowers of art do not bear transplanting, and by thus losing appropriateness they become 'matter in the wrong place,' and therefore incapable of giving pleasure. We must, no doubt, base our work on the traditions of the past,

but the actual copying of existing buildings is not art, but archæology. The use for which a building is required, must affect its architectural forms, or these will fail to satisfy and charm us.

Modern utilitarian neglect of beauty.

Architecture, therefore, recognises utility as the basis of her work, on which she erects a superstructure of her own, with grace of proportion and beauty of ornament. Without such additions, utility alone would give us, not architecture, but mere building. The greatest works of the present generation, those of scientific engineering, are of the latter class. In them the actual necessities of construction have alone been recognised, with the results that may be seen, for example, on the Surrey side of London Bridge, where one of the finest old churches we possess is hemmed in by iron structures of surprising ugliness. If the conviction, which I endeavoured to explain to you in my last Lecture, were duly recognised—if architecture were felt to be a matter of public interest—any such disfigurement of our public places would not be permitted; and while the argument of utility must always have great weight, it would be carefully scanned, and not be permitted, as a matter of course, to override all other considerations. If, for example, it be conceded that to bring a railway into the centre of a town be a public gain, it does not follow that those who undertake such a useful work, have any right to deface the thoroughfares, and destroy the beauty of surrounding architectural monuments. Still less does it follow that ugliness of design is necessary, or that the required utility could not be obtained without artistic disfigurement and loss. If only people really cared for these things, a way would soon be found to reconcile apparently discordant claims; but this will not be done, as long as apathetic legislation gives powers to railway companies to do as they please, after which it is useless for us to fill the air with outcries at the natural result.

The question of costs not to be evaded.

To combine art with science in utilitarian structures must, however, be a task of difficulty with the architect and the engineer, for one of our greatest perplexities will always be that of cost. If the utilitarian purpose can be served by small expenditure, while a more artistic structure will cost a

relatively enormous amount, it must be evident that the latter rests under a heavy disadvantage in pleading its cause.

You will often be told that it is as easy to make a good design inexpensive as costly; but such a doctrine is open to many exceptions. The use of ironwork, instead of masonry, for example, is a case in point. No one would like to see the iron roofs of our railway stations adopted as architectural precedents, and we had recently, in the case of London Bridge, an illustration of the difficulty to which I have alluded. Here it was stated that the bridge was so thronged that an additional width was required as a matter of urgency for the public convenience. A plan was propounded for giving such extra width by iron arches, added, one on each side of the existing structure of masonry. The cost of such additions, it was said, would be small; whereas, to widen the bridge with masonry in the obviously more suitable manner in an architectural sense, would be so costly, and fraught with such danger to the existing structure, that an improvement urgently demanded by public wants could not be obtained at all, if a masonry design were insisted on. Here, then, there was a direct conflict between utility and art. The existing bridge is one of the best specimens of bridge-architecture in the world; but if it were found to be inadequate to the public needs, what claim could it, as a utilitarian structure, advance for exact preservation? If, moreover, it were definitely proved that masonry additions could not be made without imperilling the present foundations and superstructure, and that it must either be widened by iron, or not at all, it would be a great responsibility for artists to venture authoritatively to declare that the thousands and hundreds of thousands, who use the bridge daily, must be for ever inconvenienced by a thoroughfare too narrow for the traffic of a great commercial city. Fortunately this dilemma was avoided, as the practical necessity of the case was held not to have been proved to the satisfaction of Parliament.

Illustrations. Paramount force of utility in case of bridges.

(II.) A well-designed bridge is, perhaps, as good an illustration as can be found of architecture as a useful art. Some of you, no doubt, know how picturesque an object such a structure became in the hands of Mediæval architects;

as, for example, at Prague, where the old forms of arches and parapets, with the towers and archways of access, still remain. Old London Bridge, again, is known to many of us from pictures and engravings, and must have been a highly interesting subject to the artist. The Ponte Vecchio at Florence is another instance of the same kind, and, like old London Bridge, was lined with shops. London Bridge was, indeed, not only a means of communication between different parts of the same great city, as with us, but it also formed in olden times the gate or entrance to the city of London. Some of the houses upon it were of considerable architectural pretension, with passage-ways through them for the public. A chapel was, in accordance with custom, a portion of the bridge buildings, so that the passer-by might have the opportunity of praying for the success of a journey about to be commenced, or of giving thanks for his safe return on its completion.

Looking to the interest, both architectural and historical, which concentrated itself in old London Bridge, its removal in favour of the present structure must have caused many a regret, and might have been expected to excite to frenzy any Society for the Preservation of Ancient Monuments, if such a fraternity had then existed. The time came, nevertheless, when old London Bridge, with all its picturesqueness, had to be surrendered, because it did not comply with the principle of combination of utility with art. The old bridge-builders had done their utmost, and had constructed such piers and arches as were then considered the best possible; but with increased scientific knowledge, these had become intolerable, and an obstructed waterway could no longer be permitted. New London Bridge thus arose from utilitarian considerations, and was, in like manner with its predecessor, an example of the constructive art of its day. Now that science would appear to have adopted iron or steel as the bridge-building material of the time, it is probable that the days of stone bridge-building are over, and that an engineer, if entrusted now with the erection of another new London Bridge, would propose an iron structure. However much we may regret such a conclusion, it appears to be inevitable, as the primary purpose of a bridge is utility.

Ugliness not always due to utility.

Assuming, therefore, that in the future the forms of our utilitarian architecture must be modified, it is for those who would cherish and preserve its artistic element, to consider how far such suggested changes are really essential. It is not to be too hastily assumed that ugly structures are convenient; still less that to be convenient, they must necessarily be ugly.

Contrast of the two Menai bridges.

Take another instance of bridge-building. The Menai Straits are spanned by two bridges. The problem was the same in each case, viz. to carry a roadway across the Straits at a great height, and with the least possible interference with the navigation. The one bridge was necessary for the turnpike road, the other had the more difficult task of supporting the great weight of a railway.

In the first case, the engineer adopted the principle of suspension, and all who have seen Telford's bridge will, I think, admit that far from disfiguring the view, or being a blot upon the landscape, it is a thing of interest, if not of actual beauty, which few would wish absent.

Now, let us consider the case of its younger neighbour, the Britannia Bridge. Here we have the adoption of the trabeated principle of large iron beams laid upon supports of masonry, which rise from the valley beneath, and tower up above the beams, to a height far exceeding that which is necessary for their support. I well remember the animated discussions in scientific circles as to the form and design of these beams, which were ultimately decided upon as rectangular tubes. In the many discussions of the merits and defects of circular, elliptical, or square sections, I do not recollect that a word was said of architectural effect. Had any one ventured to suggest that this too was an important matter, and that an unsightly structure would be an eyesore for all time, he would have been promptly told that the forms to be employed were an affair of science alone, and that utility, pure and simple, would dictate their arrangement.

In the result, a lovely valley was defaced by one of the most unsightly structures of this mechanical age. Now the question arises, was this necessary? Let us see. The Britannia Bridge has, at any rate, escaped the flattery of

imitation, and the next great bridge which was erected in another part of England differed greatly from it. Even the distribution of metal in the section of the tubes has been questioned, and if the bridge was to be built now, it is perhaps not too much to say that a different design would almost certainly be adopted.

It is known that the great height of the towers is due to the contemplation of the possible necessity for chains of suspension, to aid in the support of the horizontal beams. The architectural result is unfortunate. A pier or a column is an appropriate expedient to support a weight placed on the top of it. Here the tubes are not on the top, but about two-thirds up, and pass through the piers in such a manner as to lead us to wonder how the masonry of the upper parts is supported. The towers, being obviously unnecessary, fail to please, in contrast with those on Mediæval bridges, to which I have just referred, the purpose of which was obvious to every passer-by.

The deficiencies of the Britannia Bridge, in an artistic sense, are not, therefore, really due to the dictates of science and utility, but to imperfect apprehension of them, resulting in the introduction of unnecessary features. We have, consequently, a right to test carefully the assertions of those who bid us accept an ugly utility as the all-governing principle of even such essentially useful structures as bridges.

(*b*) The use of the flying buttress in Northern Gothic.

I have chosen the latter class of buildings to illustrate my meaning, because in them such a principle may fairly claim to be predominant; but even in matters which more naturally belong to architecture as a Fine Art, utility is not found to be necessarily opposed to beauty.

Let us refer for a moment to the flying buttress. The Gothic architects, in their love of vaulted roofs, soon became confronted with structural difficulties. In edifices of moderate height these were more or less easily surmounted; but the case became different when great altitude was desired, as in the French churches, with their lofty clearstories and large windows for the display of coloured glass. If stone vaults had to be poised in the air, there would be a thrust somewhere, which had to be guarded against.

The architects of Italy sought for the solution, as we know, in the adoption of iron tie-bars, avoiding buttresses. We see, however, by examination of Italian Gothic, that Mediæval principles of art were rather passively tolerated, than actively loved, in the land which cherished the memories of Rome and Greece. Here the horizontal principle predominated in architecture, and the elaborate groined roofs of Northern art found no home. Simple vaults were raised upon walls of no great elevation, and such thrust as resulted was provided for by the simple expedient above referred to.

The Northern Mediæval architect scorned such a device. To him it seemed unreasonable that his work should need adventitious aid to enable it to stand. It should be complete in itself, and built of homogeneous material. Thus arose the invention of the flying buttress. Accustomed to break the surface of his walls by the ordinary solid buttress, it was in his eyes only a natural development to extend it upwards, and connect it, by means of an arch, with the roof, which required its support. By this method, the whole mass of the building became self-sustaining, each part lending to every other that support which might be locally wanting in its own construction.

Its occasional exaggeration.

The buttress, in whatever form, is, therefore, an example of the adoption by architecture of a utilitarian feature, and of the incorporation of such a feature into a style. Like all other things, it ceases to please when exaggerated; but as used by English Mediæval builders, it adds in no slight degree to the picturesqueness of their work. The vaults in English churches are seldom so ambitious, or the clearstories so developed, as in foreign examples, and the flying buttress has, therefore, been kept with us under the restraining influence of moderation. An example to the contrary is found at Nôtre Dame in Paris, where the flying buttresses around the apse not only obscure and confuse the architecture, but even suggest the existence of weakness by bringing before the mind too obviously the necessity for unusual means of support. In such a case as this, it is the buttress which becomes the principal feature of the design, and reduces the building which it serves to subordination—a total inversion

of the relations which ought to exist, for utility here becomes a burden, and injures, from the artistic point of view, that which it should assist.

Its true merits.

Differences of opinion will, of course, exist as to the æsthetic value of the buttress. To those whose taste leads them in Classic directions, the buttress will seem to be fatal to breadth of effect. Others, again, will censure it as suggestive of weakness in the wall to which it is applied. Looking, however, to the predominance of the vertical principle in Northern Mediæval architecture, the buttress seems to be a natural result of such a principle, and thus to take its place readily in a style which expresses vigour rather than repose.

(c) The æsthetic demand of more than the barely necessary.

We may see, from such instances as I have cited, that architectural beauty is in no slight degree mixed up with considerations of utility, and that features obviously unnecessary for structural purposes do not please. It must not, however, be inferred, on the other hand, that architecture can ever be content with the fulfilment of the bare necessities of structure.

The eye needs to be perfectly assured of the solidity and permanent character of a work of true architecture. This is why it refuses to be satisfied with the thin ironwork and bare columns of modern engineering. In them scientific calculation of the strength of materials has given us a minimum, where we demand a maximum. We have a work of pure reason, with an absence of imagination—one which addresses itself to the intellect alone, and to which we cannot give the title of art. For art involves the idea of sacrifice, of something given to a noble cause, not a nicely calculated less or more, which starves the higher aspirations of our nature. We need a system of construction which, after satisfying the bare necessities of the case, leaves a margin not only of strength, but of susceptibility of decoration of an elevated character, so that, for example, the column created by necessity may become a beautiful object, which we love to contemplate.

The scientific daring of the Mediæval architects often led them into difficulties, and the artistic value of great architectural monuments will not be found to consist in the

amount of science displayed in their construction. In such designs science may aid, but it must not lead. If it were otherwise, the most perfect interior would be that which had been erected with the least amount of sectional area in its supports, and the study of mechanics would be the road to success in art.

The Egyptian massiveness.

As examples of the application of a contrary principle, the architectural remains in Egypt are perhaps the most striking. Their huge columns are out of all proportion to the work they have to do, and though they cannot be altogether justified, and should far less be imitated now, it is impossible to deny the solemnity and impressiveness of the Hypostyle Hall at Karnac. The great massiveness of Egyptian work satisfies one of the demands of the lover of architecture, but not the rest. It gives the sense of repose and permanency which he desires; but he looks in vain for the grace, combined with fitness, which perfect architecture should display. The temples on the Nile were perhaps appropriate for the exercise of a religion of outward ceremonial alone; and thus the enormous columns may be accepted, as harmonizing with the mighty sphinxes and huge colossi, which sought to impress the mind by their mass and dimensions. Architecture with ourselves, however, must be a more reasonable art, and a mere worship of bigness is no longer tolerated. We cannot suppose that any great buildings can again be erected for purposes of display alone, and thus architecture must needs be with us—whatever it may have been in the dim past—an art of utility.

The progress to lightness in Gothic architecture.

If the Egyptians help us to illustrate one side of the argument, we may also find existing examples of the opposing principle, showing the effects of exaggeration of scientific skill in architectural design. In our Norman cathedrals we see an almost Egyptian superfluity, although, from faulty masonry, the strength is not always as great as it seems. Starting from such types, the architects of the Middle Ages diminished piers, increased the span of arches, and built stone vaults, delighting in the exercise of their constructive skill. Using small stones, they adapted their work to the material, and displayed the utmost ingenuity and power of

contrivance. At length the limit of beauty was reached, and architecture ceased to interest, when it became a question of erecting the widest practicable vaults on the thinnest of pillars, and piercing solid walls with the largest possible windows, having the most attenuated mullions.

We see the effect of such exaggeration more often abroad than in this country. The Mediæval architects of France and Germany seem to have been more daring than our own, and, while they achieved splendid results, fell also into snares which the more quiet and sober English judgment avoided. Thus at Cologne Cathedral the supports occupy one-tenth of the area inclosed, while at Salisbury they are not less than one-eighth. In the former example the result is a want of dignity and apparent solidity. The columns, numerous as they are, are not impressive, and although the dimensions are magnificent, the interior as a whole does not produce the effect attained by many smaller buildings.

The insufficiency of mere size for grandeur.

Grandeur of size is doubtless one of the chief elements of architectural magnificence, but in the absence of other qualities it will not alone satisfy us. If a building is not beautiful in our eyes, it gives us no pleasure to be told how many hundred feet it is long, or how many rooms it contains. To give their full importance to large dimensions, we require a varied and appropriately contrasted detail, to supply a scale to the whole, and so confer value on greatness. Every one knows how strikingly the want of such detail is found in St. Peter's at Rome, where, in order to induce appreciation of size, you must be told the length of a carved angel's wings or the size of a cherub's toe. Something of the same defect may, I think, be noticed at Cologne, arising principally from the thinness of the columns which support the roof, and their too monotonous uniformity. The symmetry is too complete. The art is too obvious, and little is left to the imagination. Such deficiencies of variety and contrast are seldom found in our best English examples, and, though Salisbury Cathedral has not the same pretensions as Cologne, and although the interior must yield to the exterior in architectural effect, we cannot but be convinced that its designers could have erected a church which would have

surpassed its rival, if similar opportunities had been afforded them.

(*d*) The high-pitched roof.

There is another feature with which we are familiar, adopted by architecture at the bidding of utility, viz. the high-pitched roof, eminently suggestive of the difficulties of climate, against which the architect has to contend.

Its necessity.

Allowing much for the influence of race on the styles of architecture adopted in various countries, the perhaps greater influence of climate must never be overlooked. In the sunny lands of the South the problem is mainly to obtain shelter from the sun. A roof in the East is valued as a place from which to court the evening breezes after a sultry day, and on which to sleep in the open air without too much exposure. Under these circumstances the roofs assume in such countries the form of flat terraces. Proceeding northwards, different questions arise, such as protection from rain and snow, from undue variations of temperature, and the like. A sloping form, with projecting eaves, became thus dictated by utility, and, as usual, Architecture listened to her behests. From the simple covering of the Swiss châlet, she advanced to the high-pitched roof, with gutters and ornamental parapets, of the thirteenth and fourteenth centuries. With high roofs over the main buildings, high-pitched spires and pinnacles became associated by an obvious congruity, and a vast wealth of design was lavished upon these details, with gables, and dormer windows, and all matters connected therewith.

Its beauty.

Having accepted the high roof, Architecture dealt with it further by making it her own by the use of decorative lead and metal work. It thus became an acknowledged part of Mediæval architecture, and, indeed, one of its chief peculiarities, if not one of its greatest beauties, carrying onward the development of the principle of verticality which governed the style. It was doubtless from intuitive conviction on this point that the Mediæval architects adopted a higher pitch than was rendered actually necessary by utilitarian considerations, and made their gables of extreme steepness.

The high roof in such cases serves a double artistic purpose. By its transverse section and its consequent gable

it harmonises with the general vertical principle of Gothic design in the end elevation; while, on the other hand, when seen from the side of a long building, such as the nave of a cathedral, it supplies an element of repose, and prevents the same principle of verticality from being unduly exaggerated. The buttresses and pinnacles which divide the bays would otherwise dominate too completely, not only by reason of their deep shadows, but also from the breaks they would produce in the sky-line. An illustration of my meaning may be found in Westminster Abbey, where the architectural value of the high roof in relation to these points of effect is very apparent. The long horizontal line of roof gives, as we may see in this and other instances, an air of dignity to the mass which would otherwise be lacking, tempering the vertical vigour of Gothic work with the quieter influence of the horizontal principle cherished by Classic art.

Open timber roofs.

In dealing with the roof, as with every other detail of their work, the best architects of the Middle Ages adapted their design to the nature of the materials employed, and in this respect the English wooden roofs have an especial fame. In the great cathedrals and other buildings of the first class, the roof, serving only for a necessary protection to the stone groining below, did not possess any internal architectural character; but in the great majority of buildings of less pretension wooden roofs were used, with framing visible from the interior, and designed with the utmost care.

There is, I think, no detail of English architecture more worthy the attention of the student than its open timber roofs. In those of the best periods every necessary part of the construction is displayed, and rendered sightly by appropriate ornament. In cases where cheapness and plainness were desired, we may find nothing but the rafters and other details of necessary construction; but even in such structures the arrangement is generally pleasing, and the rafters are so placed as to supply, by their interlacing outlines, an effect of perspective, which gives to a composition which might seem only utilitarian a title to be ranked as architectural art. We, who are familiar with the beautiful roof of Westminster Hall, do not need to be reminded of the constructional skill and the artistic genius which worked hand in

hand on the grander and more stately designs of the Middle Ages. The roof at Westminster covered a royal palace, and, like another piece of architecture, of which we heard last week, was indeed 'fit for a king.'

It would not be difficult to find other instances of architectural detail which would illustrate the argument on which I am now insisting; but I think I have said enough to prove the intimate relations between art and utility in Architecture, in regard to which, while I claim for her nothing less than a place among the fine arts, I do not, on the other hand, consider it beneath her dignity to accept the title also of a useful art.

(e) Constructional truthfulness.

We have seen that without usefulness architecture would not have been called into existence, for it was only after the first demands of necessity had been complied with, that art was invoked to add a refining grace to the structures of utility. Architecture, thus called upon, devoted her energies not to constructing ornament, but to ornamenting construction, and her success in so doing is not without encouragement for the future as science advances. The age of no-architecture in this country, now happily brought to an end, was fertile in shams and concealed construction. The great engineering works of the present day have at least taught architects that they need not be afraid of exhibiting structural details, although it is unfortunately too obvious that such works have not solved the problem of uniting truth with beauty, in such a manner as to become artistic delights as well as scientific triumphs.

Exaggerations of it to crudeness and wilful irregularity.

There is full scope for architectural skill in uniting art with utility. We are told sometimes that utility is so far to rule that every portion of a design should declare its use, whether such use be noble or ignoble, and however the architectural composition, as a whole, may be affected by such partial treatment. We see daily in consequence designs of shreds and patches, which, though affecting to make a god of utility, are often in reality not convenient, while they offend the sense of fitness, which demands dignity and elegance as well as convenience in architectural work. Nor is this the only evil. In paying tithe of mint, anise, and cummin, the weightier matters of the law are too often neglected.

Young architects are apt sometimes to act as if it were a triumph of their art to throw down at random parts of a composition, and accept the result. Irregularity is supposed of necessity to give picturesqueness, and the external quaintness of a house is more studied than either the purse or the comfort of its inmates. This, I need hardly say, is a complete inversion of the principle that our art is based upon utility.

To indulge in such tastes is doubtless far easier than to study carefully the requirements of each building, and consider how they can be artistically complied with. This, however, and no less, is the duty of the architect, and only by performing it thoroughly can he achieve complete success. It is useless for a house, for example, to be delightful to the architect, with gables, turrets, and dormers, if the owner declares that to such matters have been sacrificed warmth, comfort, and ventilation. A design of architecture must always be a compromise, and when one class of considerations obtrude themselves with an exaggerated prominency, the others become more or less sacrificed.

Excepting in large structures, I should advise the student to be on his guard against needless irregularities of plan. In an artistic sense he has usually no greatness of dimensions or breadth of effect to throw away, and, from the utilitarian point of view, irregularity means too often expense and want of comfort, from an excessive surface of external wall and complication of roof.

Careful study of plan.

In setting down his plan on paper the young architect will save himself from much difficulty, if he will from the first bear in mind the arrangement of his roof, so as to draw no part of his plan without knowing in his mind how he intends to cover it. The same caution may be given as to thinking from the first of sanitary necessities, warming and ventilation, subjects to which architects have given too little attention, apparently under the idea that what suited our ancestors will suit ourselves. No conclusion can be more erroneous. When once public opinion is fully convinced that improvements can be had, it will insist on their incorporation in our architecture; and, unless architects fully recognise this fact, it is inevitable that their

province will be even more invaded than has hitherto been the case. If the noblest works of our olden architecture have been based upon usefulness, and have satisfied the wants of their time, we cannot complain if a similar necessity be laid upon ourselves, and must think it no hardship if, in an age of universal questioning, we are called upon to give a reason for what we do.

The architectural future.

Architecture, of course, is not all utility, and has in her higher character, as we saw in the last lecture, claims on the consideration of society at large. She is bound to assert her place in regard to the public buildings of the country. In this position, at any rate, she can tolerate no derogation from her position as one of the Fine Arts. It is her province to erect temples of worship and to dignify cities. In humbler works it is her privilege to carry a feeling for art into the homes of the thousands. In fine, she has to unite beauty with utility, and apply the result to the service of men. It should not surely be said of our art that all the good is over. We have the past for instruction, and not for blind imitation. The powers of man are not diminished since the days of the artistic giants of antiquity, while science has conferred upon us capacities of which they little dreamt. Architecture, therefore, pursuing her mission, and supported by Art on the one hand and by Science on the other, may, if true to herself, still look hopefully forward, for, in the language of our President's address, on a recent occasion,[3] in which he sums up the argument in better words than I could use—

'Certain it is that architects may look with a proud confidence into the future, for they practise an art raised on an immovable basis of science, clothing itself in forms of abstract beauty, enriched by the co-operation of sculpture, and yet made lovelier when it chooses by the charms of colour. And though no man shall invent a new style—as the foolish phrase goes—for styles are not invented but evolved, I do not doubt but that in due time the tentative and eclectic phase through which architecture seems now to

[3] Discourse delivered to the students of the Royal Academy, on the distribution of the prizes, December 10, 1879, by Sir Frederick Leighton, P.R.A.

be passing will give place to more homogeneous development, in which, whilst the individuality of the artist finds free room to assert itself, the requirements, physical and intellectual, of each particular country will achieve a more definite and distinctive expression.'

LECTURE V.[1]

ARCHITECTURE GOVERNED BY TECHNICAL PRINCIPLES.

PASSING onwards in the course marked out for the present lectures, I now propose to inquire into some of those principles which should guide architects in their work, and which may be called technical.

Special need of technical study in the architect.

Architects must always acknowledge such rules to a far greater extent than painters and sculptors. These may, indeed, study with advantage certain principles of composition as practised by old masters, and they would fare none the worse for some knowledge of pigments, and of such mechanical details of their art as our Professor of Chemistry can supply. Manual dexterity may also be increased by practice in the schools. But, when all this has been done, the artist must be left to himself, and his own innate feeling will be his best instructor.

The architectural student, on the other hand, is only on the threshold of his career, when he has learned as much as this. He must devote himself to his art as to a learned profession; and, though he must base his present designs and future expectations on the achievements of the past, he must study the existing needs of his own time, that he may meet them, both with art and with common sense. Less unfettered than his brother artists, he has to deal with more intractable materials (to say nothing of more troublesome persons), and attempts at originality prove, in his case, too often to be a snare. It is, therefore, essential for him to deduce, if it be possible, from experience some assistance for his own practice, some principles which may aid him, not so much in imitating successes as in avoiding errors.

[1] Delivered January 22, 1880.

An architect in designing a work of art has always to keep before his mind the *size* and *scale* of his building, the necessity of *stability*, and the method and materials of *construction*, all of which may be described as technical principles of architecture.

In discussing such principles, we will first refer to the element of size. In this respect architecture has an advantage over the sister arts, as I pointed out in a former lecture; for the impression caused by the size of an architectural work is, to a great extent, if not altogether, independent of the art displayed in it. (I.) Size.

We all know the effect produced upon us by a vast multitude of persons assembled in one place, though we may think little of the individuals composing it. We see a great gathering composed, it may be, of those who seem to us very ordinary and commonplace people; we should not perhaps dream of submitting our own judgment to any unit of the mass; but size tells, and the feeling has found expression in the saying, *Vox populi vox Dei*. A large building will, in like manner, always produce an effect *per se*, and the quality of mere size is a powerful instrument in the hands of the architect. It is, no doubt, one of the lower attributes of Architecture, and may to some of us seem of little importance in comparison with the artistic aspect of her work; but the fact nevertheless remains, that size is one of the chief elements of architectural impressiveness. Its powerful effect on the mind.

It is usually at first sight that size affects us, as it arouses interest by arresting the attention. If a traveller, entering a foreign town, catches a hasty view of two buildings, a large and a small one, it is to the former that he will first turn his steps. Nor can a small work of architecture, however beautiful, impress the mind of ordinary observers as much as a building which, from its greater size, is able to multiply parts, even if it be less perfectly designed.

As an illustration of the effect of mere size without any architectural design, we have the Pyramids. Seen from a distance, they are altogether uninteresting, and, even when approached, display no beauty of any kind. The form, moreover, with its receding apex, is not favourable to the display of size. The visitor finds, however, that the impression Illustration from the Pyramids.

of size grows upon him, as he discovers with surprise that the outline which seemed so smooth from afar, is in reality notched with successive steps, and that each of these steps exceeds half the height of a man. Here we have no architecture, but only a mere mass of large stones piled up in a symmetrical heap. Nothing more inartistic can be imagined: and yet, because the heap is a big one, it has impressed, and will doubtless continue to impress, the imaginations of hundreds of thousands; extorting from them an admiration not to be obtained for structures far more interesting to the architect.

The worship of bigness is, in such an instance, carried to extremity, and appears, in consequence, commonplace and vulgar; but as the principle exists, and the architect has the power to turn it to account, he ought not to neglect it. And this, moreover, should be the case, whatever may be the actual dimensions of the work on which he may be engaged. There are few structures so small that they may not gain by the knowledge of the architect how to make the most of their size; and there can be no building so large, that its importance may not be frittered away by injudicious treatment.

The value of scale in producing the effect of size.

To obtain the due effect of size, the architect must study scale. He needs something to mark greatness by contrast. The Pyramids, seen in solitude, appear much smaller than when surrounded by life, and marking their real dimensions by contrast with the Arabs swarming over and upon them. A colossal statue, in the same way, gives no idea of its actual bigness, until an ordinary human being is placed beside it. It then asserts its real importance, just as a great man stands out from among his fellows, and by comparison manifests his real greatness.

The Greeks did not erect large buildings, because they did not require them; and their temples impress us rather as beautiful shrines for sculpture, than as grand architectural monuments. The effect produced in the case of the Parthenon, for example, is due to exquisite proportions combined with beautiful detail, and not to size.

The Coliseum.

The Roman architects, on the other hand, fully appreciated the value of this means of obtaining architectural

effect. Large edifices, such as the Coliseum, were the fruit of their large resource and energy; for Rome, as the capital of the world, became the centre to which all turned in art, as afterwards in religion and literature; and her empire, extending from sea to sea, gave security to subject races, and assured to them material prosperity. Architecture, as an art of peace, consequently flourished, and throughout the vast empire imposing buildings arose, such as temples, theatres, and baths, while public works of utility, like aqueducts and roads, were not neglected. The Coliseum impresses us, at least as much by mere size, as by the beauty of its parts. These, indeed, are in no way remarkable, although from their frequent multiplication they give effect to the whole structure, and supply the necessary measure by means of which its vastness may be appreciated.

The Roman baths.

The great Roman baths are in too imperfect a condition to enable us to speak confidently of their original architectural effect; but from the remains that have been discovered, particularly of mosaics and sculpture, we have every reason to conclude that their vast size was not thrown away, as has been done at St. Peter's; but that details of moderate dimensions, and statues but little exceeding the size of life, gave that opportunity of comparison which is essential to the impressiveness of a great building.

The Gothic cathedrals.

In the Middle Ages we find the same principle worked out, and with even more technical skill. The builders of our cathedrals did not, indeed, aspire to the reproduction of the broad surfaces and spacious vaults of Imperial Rome. They sought to produce grandeur rather by a repetition of parts than by vastness of any single feature. Their works contained details of moderate dimensions, often repeated. The effect of such multiplication of small parts is to give scale to the whole building, and to make the latter appear even larger than it really is. I dare say that some of you, in summer wanderings among the many architectural beauties of France, have suddenly come upon a great church, huddled up among mean buildings, which cling to it like parasites. The first sensation is that of incongruity, to be deplored, and, if possible, removed; but reflection and observation will often convince you of the gain of impressive-

ness derived by the giant structure from the contrast with its pigmy neighbours. The means are, of course, not those which the architect would desire as the best, but it is his part to produce the same result by art, which has been here attained by accident.

The great portals of French cathedrals.

We may observe such a result of purely architectural design in some of the great portals which are more the special glory of French than of English churches. In these instances we shall find the door itself to be of moderate dimensions, set as it were in a frame, or rather succession of frames, of great architectural elaboration. Order after order of columns decorates the splayed sides of the recess in which the door is sunk, and between the columns, and in the arches over them, an infinity of small figures and canopies fill the whole surface with details on so small a scale, that they invest the whole composition with an air of size and grandeur unattainable by any other means.

I am now speaking of such designs only as illustrations of the principle under consideration, and apart altogether from the artistic value of the means adopted to carry it out; for, however great may be my admiration for these designs considered as a whole, I have never been able to reconcile myself to small figures tilting forwards in the arches, so that they would fall on the heads of the entering worshippers if not artificially secured in their places by unseen supports. As an illustration, however, of the value of small detail in giving the effect of great size, I know of nothing better than these noble French doorways. If they fail in giving perfect satisfaction, the reason, in my judgment at least, is that they are apparently deficient in another essential principle among the technical rules of architecture—stability, to which we will now briefly turn our attention.

(II.) STABILITY, apparent as well as real.

In a world full of turmoil and change, we like to look upon some ancient building, standing as a landmark in the midst of tumult—a rock beaten by the stormy waves in unavailing uproar. To satisfy this requirement, architecture should give us not only stability, but a stability which is obvious, even to the unlearned.

No one who enters Westminster Abbey gives a thought to the sufficiency of the columns and arches. This he is

able to take for granted, by reason of an apparent superabundance of strength; and though such an appearance may sometimes be misleading, doubts would only suggest themselves to a scientific inquirer, or one well acquainted with defects which are apt to lurk in the construction. It is different with some modern works, the offspring of science alone. Here we find light iron roofs and scanty columns, and wonder how long they will stand, and trust they will do so till we are out of reach. Or we are called upon to admire the cleverness of the designer, who has used a less weight of metal than has ever been adopted before. In such cases, stability, in its true architectural sense, is altogether wanting; and when we find ourselves marvelling at the mechanical ingenuity of the work, we may be sure that such ingenuity has banished art.

Illustrations from ancient buildings.

In structures in which the horizontal principle of construction has been fully carried out, as in Egypt and Greece, the distances between the columns were small, though, as we know by the obelisks and other monuments, stones of large dimensions could have been procured. The quality of stability was here assured by the obvious preponderance of the supporting element of the design, other considerations, whether of art or utility, being sacrificed to this principle.

From the examination of the past as well as from our own common sense, we may deduce the conclusion that, in architecture, we must insist on stability as an essential principle, not only of necessary safety, but also of effect. It is, of course, a commonplace that an architect must not allow his buildings to fall down. If he did, he would speedily find himself within the strong grasp of the law. But it is not always equally recognised that, with a view to artistic effect, a piece of architecture must look stable, as well as be stable.

The Parthenon not only stands on a rock, but has a plain and satisfactory base line in the steps which surround it. The Romans followed the same rule, or, when they departed from it, placed their columns on a stylobate, which gives in another way the same appearance of stability. Mediæval architects did not attach the same importance to an unbroken base line, which it would have been, indeed, difficult for them

to have obtained, in consequence of the bold projections of their buttresses and turrets; but they were careful to strengthen the lower parts of their buildings with projections from the general line of the work, and plinths, often doubled and trebled.

Value of a good base line.

It is difficult to overstate the artistic value of a good base line. There may be instances in which its omission may give the effect of vigour, as in the case of certain forms of towers, such as that of the great Campanile at Venice. A tower thus standing alone makes, perhaps, the most of its height by starting abruptly from the earth. It almost seems to rush upwards from the ground as a rocket might do, without a note of preparation. But setting aside exceptional cases, stability in architecture requires that a building should appear to rest on a secure foundation, and for this purpose demands a good base line.

Common sense tells us that a wall should be stronger and thicker at the bottom than the top, and what is true of the individual wall is also true of the structure as a whole. Architects are required by law in our great towns to widen their walls downwards, and, moreover, to add to them footings, which may even double their thickness, so that walls three feet thick may start with a width of six feet at their first commencement. Where basements exist, all this is below ground, but when we approach a building the eye gives no credit for such hidden construction. The building, as far as the spectator is concerned, rests upon the surface of the earth; and, unless the design shows in some manner the existence of a satisfactory base, he is conscious of a defect, in the absence of that obvious stability which we hold to be a rule of art.

We may see the effect of such a base as I have been discussing at the Houses of Parliament. Here we have a building of great elaboration, erected upon a plain granite basement, the latter being at times concealed from view by the rise of the tide. The building, owing to the unfavourable level of its site, is not seen to advantage from Westminster Bridge, and can be far more advantageously inspected from the opposite bank of the river. From this point of view the artistic value of the base line can be thoroughly

appreciated, and the contrast observed between its presence and absence according to the fallen or risen tide.

Signal defects of modern street architecture.

The absence of solidity is only too painfully evident in much of the street architecture of modern days. The architect, who is called upon to design such work, is not to be envied; for under the pressure of commercial requirements, he will too often find it impossible to secure apparent stability in his work, as long as shops exist, and demand great areas of plate-glass in their windows, hiding the necessary supports, in the shape of some miserable iron bars, behind goods or mirrors, which serve to conceal from view their stinted proportions.

The problem appears hopeless of solution, as long as the conditions of it remain the same. Possibly changes in the current of trade, like those which are now leading to the concentration of business in large establishments, may tend to diminish the importance of the plate-glass window in the eyes of the shopkeeper, and so relieve the architect from some of his difficulties. The French method of laying out blocks of buildings with inner courtyards, approached by covered carriage-ways with handsome entrances, possesses, independently of convenience, great architectural advantages over our own system of unbroken frontages of plate glass, forming the ground-storey of our streets.

Architects cannot, however, enforce changes of this kind, however much they may desire them; and in the meantime, all that seems feasible with us at present is to group the upper windows in such a manner as to avoid, as far as possible, the appearance of great central weight, and to make the most of such solid piers, as are still permitted or enjoined by the law, in the interests of public safety.

(III.) Construction.

Passing now from the principle of stability, we come to the question of construction, which is, of course, intimately connected with it. It is here that the architect feels in its full force his lack of freedom, in contrast with the liberty of his brother artists. While they do pretty much as they like, he must bear a heavy responsibility. His drawings may be as good as theirs; but, unlike them, they are not final, they are only a means to an end. It is his duty not to make pretty

drawings, but to erect good buildings. After the spirited sketch comes the matter-of-fact builder, who asks how it is to be carried out—to be followed by the estimator, whose dispassionate calculations often chill the enthusiasm of the most hopeful architect, and send a shiver of economy through his whole system.

Use of materials.

If knowledge of construction is thus essential to the architect on the utilitarian side of his art, it is not less necessary in an artistic sense. Not only is it important to know in what positions of a design certain materials may be safely used, but also what will be their appearance and effect. The former requirement applies to the scientific, the latter to the artistic, element in architecture. Designs which may be effective in one material will be unfitted for others. Faults of execution may interfere with well-studied detail. Colour may be well or ill introduced; magnificence or meanness of effect may be produced by the dimensions or quality of the materials used.

These are all questions of construction, and thus construction becomes one of the leading technical principles which affect architecture. The materials now at the disposal of the architect are, for the most part at least, the same as he has used for centuries. Their qualities have been duly tested, and the limits of their use, with some exceptions, ascertained by actual experiment.

Iron.

In modern times, the use of iron in construction has, however, been so greatly extended as almost to invest it with the character of a new material, chiefly employed by engineers and shipbuilders rather than by architects; for we cannot rank such buildings as the Crystal Palace among works of architecture. The increased employment of iron has, at present, even added to some of the architect's difficulties, as in that of the top-heavy street architecture to which I have just referred. Before iron beams were readily obtained, the architect could work on the old method of making the walls in the upper part of a building rest upon those of the lower storeys. Any reason is now considered sufficient to justify departure from this sound principle of statics; and if the architect venture to remonstrate, his scruples are at once set aside; for is not the iron worker

at hand, with his sections of all shapes, sizes, and calculated strength?

I have just referred to the Crystal Palace, and it may perhaps be as well to mention it again, as it is the most conspicuous instance we can desire of purely constructional building in iron. It is not architectural, for it does not comply with the essential principles of architecture. It certainly possesses size, and to this element of impressiveness it owes whatever success can be claimed for it. Stability, in the sense we have been considering, is not attained; and the construction is throughout that of the conservatory-building engineer, whose science has been at work, paring down columns and girders to the minimum of necessary strength. Constructive ingenuity is here all-in-all, not, as we have seen it should be, only the assistant or handmaid of architecture. The Crystal Palace.

There was a time when we were told that the Crystal Palace had inaugurated a new era, and that only stupid people like architects could doubt for a moment that our architecture would thenceforth take a new departure. It was useless to point out to a public enamoured of a new toy, that not only would such buildings prove defective in stability, but that they even failed from the first in their primary duty of affording shelter. The architect, accustomed to seek permanence in his work, could not regard with favour a system of construction which, by the expansion and contraction of its materials, seemed to its admirers about to establish the principle of perpetual motion as a novel technical rule of a newly invented art. If architects had originally any reason to feel aggrieved at the confidence with which their ever-ready teachers assumed their usual position of superiority, the 'magic of patience' has shown them that, notwithstanding all glowing predictions, the Crystal Palace has found few imitators, while its unfortunate shareholders have had but too much reason to ponder over the question of stability, in connection with the cost of repairs. From this and other specimens we do not, it must be confessed, derive much encouragement to expect new and speedy developments of iron architecture.

The use of iron gives, however, an undoubted increase of

power; as, for example, in covering large spaces, and in the construction of floors and bridges. It is necessary, therefore, for the young architect to consider how far a material which thus assists his exertions, may be advantageously employed, and, when so employed, may be treated in a suitable manner.

His designs must, indeed, always take into account the special characteristics of the materials he proposes to use. I need hardly say that he is not to condescend to shams. We know how poor and mean a stone design appears if executed in plaster, while even a plain building produces a good effect if carried out in a noble material, such as granite.

Marble. As a general rule, it may be said that those materials, which require the greatest amount of labour to be expended upon them, will please the most. Thus marble, while demanding more work, and consequently costing more money, than stone, enables us to carry out a delicate design with more precision and sharpness than the commoner material. It has been sparingly employed in this country; but in Italy even large buildings like Milan Cathedral have been constructed of marble, and its pinnacles, when seen against the pure blue sky, have a certain charm about them which disposes us to forgive any faults of detail in their design.

It would be useless to indulge in such luxuries in a damp climate like ours, and an atmosphere loaded with fog and corrupted by smoke. How many, it may be asked, of those who daily pass the Marble Arch in Hyde Park, have, in spite of its name, noticed the rarity and costliness of the material of which it is built? Dirty and uncared for, it stands in gloomy isolation—an arch of triumph of which few know the history—an entrance to a public park by which the public does not enter. In other cases, in which marble has been used externally, the results have been far from encouraging, as the beauty of colour and surface has soon yielded to the corroding influence of the atmosphere. For internal use, however, marble has of late become far more extensively used than was formerly customary; and from its fineness of surface, colour, and susceptibility of polish, it forms one of the most important resources of the architect for interior decoration.

If he desire any similar effect for the outside of his building, he may use granite. In addition to the beauty of a finely polished surface, granite possesses hardness and durability, and has hardly, I think, received as yet the attention it deserves. Unfortunately, the cost is so great as to constitute an insuperable objection to its use in the majority of cases. Attention has consequently been directed to a less expensive substitute in glazed tiles, by those who desire a polished surface. These may possibly please if employed judiciously with other materials, but in themselves they have a poverty of effect, due probably to the appearance they present of being applied to the wall instead of forming part of it. Glazed bricks are preferable to tiles in this respect as a more stable method of construction, although at the same time more costly.

Granite and glazed tiles.

Wood has always been a favourite material of the architect. In early days the private houses in most parts of England were built of it, and its partial use for external work long survived, as we know, in the so-called half-timber houses. The use of wood in this manner was natural when, from badness of roads, heavier materials were difficult to obtain; but it may be questioned whether, in the present day, they who reject a brick or stone design in favour of one of half-timber construction will not prove ultimately to have sacrificed comfort and stability.

Wood.

For interior construction wood will, doubtless, be always much used. The English Mediæval architects exercised, as we have already seen, their best skill on this convenient material, and in the Elizabethan period the elaboration of wooden staircases and wall framings was very remarkable. The young architect in preparing his designs must remember that details appropriate to woods easily worked will not be suitable for those of harder texture, different grain, or of greater difficulty in working.

It has been said that the impression produced upon us by the materials used in architecture varies directly with their money value, so that the more costly work must please in a greater degree than one of less expense. We need not, however, I think, accept without much reserve so unsatisfactory a theory.

Costliness in itself not essential to effect.

There are intrinsic merits in certain substances, as, for example, marble or granite, apart altogether from their costliness. Marble is not to be found readily, and therefore it must be sought for at considerable outlay, both for labour on the spot and for conveyance to the place where it is required. The impression it produces on the mind, however, is not that of cost, but of beauty, so great that it induces men to incur the expense necessary for obtaining a desired object. Much in the same way granite may be said to be costly because it is admired, rather than admired because it is costly: for the qualities it possesses of hardness, durability, and power to receive a lasting polish are so difficult of attainment that they are desired for their own sake. If it were not for these things, or if they were little cared for, granite would remain in its native hills; but as they are, on the contrary, highly appreciated, sacrifices are made in order to secure such advantages.

Apart from questions of the pecuniary value of materials, a building will, as a rule, satisfy us in proportion to the art displayed in it. The expenditure we chiefly prize is that of the brain rather than that of the purse; and profusion undirected by artistic feeling will even disgust us by producing the effect of vulgar ostentation.

Moreover, the art displayed must be fine art; for the mere clever development of the art of building will not only not suffice, but, if carried to such an extent as to excite notice, will even produce discontent. Here the art should conceal art, and the construction should appear to arise naturally from the circumstances of the case, leaving always on the mind an impression of sufficiency.

Conclusion. Relation of technical rules to artistic genius.

In conclusion, we must never suppose that attention to technical rules alone will make a good architect, though we may fairly say that every good architect should make it a duty to study them, with all other matters bearing on his profession.

Architecture, besides being an art of imagination, is also an art of reason and taste; and although the former, being the offspring of genius, must be inborn, the two latter may be cultivated and increased. Dealing with practical matters of importance, the imaginative architect needs to control

his imagination by reason as much as to impress upon the reason the influence of his artistic spirit. It is, therefore, a matter of great moment that he should understand the limits within which he is free to exercise his fancy. His necessary dependence upon practical considerations requires him to be acquainted with the history of his art, with the conditions of climate, and with the true principles of construction.

It is not necessary that the nineteenth-century architect should approach the history of art with a despondent feeling that nothing modern can be good, and that his aim must be to bring back to us the past. We may be sure that no age has ever possessed, or can ever possess, a monopoly of good, and, if it be our lot to live in a time of transition, we may trust that good will be ultimately evolved from it, though we who are in the heat of the combat may not perhaps be able to predict the form it will ultimately assume.

Lastly, with reference to scientific progress, the architect should be careful not to oppose himself to its dictates. Setting aside such buildings as those of a purely monumental character, in which sacrifices may be made of usefulness for considerations of a sentimental kind, he must train himself to secure all possible advantages to those who confer upon him their confidence. Details, however dear to him on historical or archæological grounds, must, for example, be unhesitatingly set aside, if found to conflict with requirements of sanitary science. On all such matters he must bring to bear the resources of an art which only exists for the public advantage—an art at once imaginative and useful—an art which aims at the highest attainment of beauty, and at the perfection of use.

Working in this manner, the architect will deserve, and may expect to receive, the consideration due to an earnest and rational co-operator in the great work of social improvement, and may best avoid the sarcasm sometimes heard, that '*Fools build houses, and wise men live in them.*'[2]

[2] This was the last Lecture delivered by the Author, only five days before his sudden death.

LECTURE VI.[1]

ARCHITECTURAL PROPORTION AND ORNAMENT.

HAVING previously dealt with some of the most important technical principles of Architecture, we now approach those parts of her province, in which taste rather than reason rules supreme. We found in our previous inquiry that a work of architecture should produce, as far as may be possible, the effect of size, stability, and sound construction, and that to insure this result certain technical considerations should be present to the mind of the architect in preparing his designs. To these elements of architectural effect he must further add ornament, not necessarily decoration, but well-considered ornamental construction, showing itself in the general forms as well as the particular details of his work.

(I.) PROPORTION.

(I.) Before we pass altogether away from the consideration of the technical rules of architecture, it may, however, be desirable to pause for a short time in order to examine one other point affecting our art, viz. Proportion—a matter obviously of great importance, and not included in any of the principles to which I called attention in my previous lectures.

The instinct of proportion.

Now proportion in the abstract is one of those things on which every one feels competent to pronounce an opinion. We know how readily we declare our judgment that anything, from a great building to a teacup, is well proportioned or the reverse. We have, in fact, certain canons of taste, acquired intuitively and stored up in our minds, which we apply (not always, of course, rightly) to this question of proportion. It is not that any particular form is good and another bad in

[1] The following Lecture would have been delivered on January 29, 1880, but for the untimely death of the Author. Although left apparently complete, it had not received his final revision. The same remark applies to Lectures VII. and VIII.

itself, for, under different circumstances, the same form may be both one and the other; but that we have, from associations, brought ourselves to an unexpressed conviction on the subject of proportion, which we, or some of us at any rate, are slow to express on any other subjects which we have not specially studied. The reason of this confidence may, perhaps, be found in the reflection that our ideas of proportion are based on our acquaintance with the human figure. Nature, in that case, teaches us the science of proportion, and we apply her lessons to the artificial productions of art. It is in this way that we find ourselves attributing to the Doric order the masculine attributes of sturdy strength and vigour, while the Corinthian indicates feminine grace and appropriate decoration.

The science of proportion.

In architecture the consideration of proportion falls under two heads: first, as it appears to the instructed, and, secondly, as it appears to the uninstructed, observer. To the first, proportion will mean much more than to the last. It is not sufficient for him that a building should please as a whole. He knows what should be the relative size of every detail,—what ratio the base should bear to the shaft, the shaft to the capital, and so forth. Any departure from recognised rules is to him a solecism and an offence; it is like a false quantity to a scholar, a *lapsus linguæ* to an educated man. The ordinary and not specially instructed observer sees none of these things. It is nothing to him whether a Grecian Doric column be used with a base, or a Corinthian column without one. The relative proportions of mouldings to each other have no significance for him, nor does he appreciate the differences of style which strike at once the more educated critic. Nevertheless, he will tell you whether a building is, in his opinion, well or ill proportioned, and on such a question the popular judgment is seldom wrong. We may conclude, therefore, that there is a science of proportion; yet that some perception of this important element of success in architecture is innate in the human mind, just as a sense of harmony may exist without any technical knowledge of music. Proportion thus assumes a position of great importance in architecture, and deserves attentive consideration at our hands.

Some suggested rules of proportion.

Many rules have been propounded for determining what is and what is not good proportion; thus it is suggested by Mr. Fergusson that the height of a room should be equal to half its width, plus the square root of its length; and again, that the best Gothic architects based their proportions on the equilateral triangle. I must confess, however, that these and other similar *dicta* have not carried conviction to my mind, though some merely conventional rules may be found in practice to secure agreeable results. A satisfactory proportion of a room may, for example, be obtained by first deciding the width, then drawing a line from one of the corners, so as to form an isosceles triangle, and making the length of the room equal to this line, being the hypothenuse of such triangle. I do not, however, propose now to discuss the difficult question of proportion, as applied by arbitrary rules to plans of buildings. I rather wish only to point out here, first, that good proportion is a recognised necessity in architecture, and, secondly, that it rests upon certain principles which cannot be departed from with impunity. The eye soon learns to accept such principles, and, as a general rule, any unusual proportion, whether of length, width, or height, is found objectionable. It is impossible, however, for an architect always to proportion his designs according to rule, nor would it be at all desirable that he should do so. Great effects are often produced by genius, notwithstanding the disregard of rules; and in spite of rules which serve to guide ordinary cases, the limits are wide within which freedom of action may be practised.

Proportions in Mediæval cathedrals.

During and after the days of Palladio and Vignola, the proportion of every moulding to be used with the five orders was discussed and settled, as if it were a matter of exact science, and as if nothing should be left to the skill and discretion of the architect in individual cases. In Mediæval days proportion was not subjected to such definite rules, or at least no record of them can be discovered: but it seems clear, from the remarkable similarity of principle which is found in the works of the time, that a science of proportion was recognised and carried out with more or less precision. Thus we find the width of our cathedrals almost always divided into three parts, with a central nave and two aisles,

and the walls of the centre division composed again of three distinct features, viz. the nave arch, triforium, and the clearstory. Various proportions were given to these parts of the design; but from a comparison of the best specimens, something like the following rule of composition may be deduced. The height of the aisle arch is half the total height of the nave, while the triforium and clearstory occupy the upper division. The latter may then be divided into three parts, one of which is given to the triforium, and two to the clearstory. Not only does this arrangement of parts appear reasonable and pleasing, but it establishes a system of proportion based on the numbers 1, 2, 3; and it has often been observed that a proportion which can be traced to a definite system, so that each part may be a multiple of each other part, is more satisfactory than one which admits of no such simple illustration.

Uneven numbers preferable to even.

In a like manner, observation may show that uneven numbers will please in architecture more than even numbers. Other things being equal, a composition with three or five windows, grouped together, will produce a better effect than one with two or four. A flight of three steps is better than four, and one of five than six. A room will be more cheerful if it have a central window, than if there is a pier with the same amount of open space arranged in two windows, one on each side of it. In a panel of tracery, or a balustrade, an uneven number of divisions is to be preferred, which will allow the central space of such panel or balustrade to be occupied by a void rather than a solid.

Importance of study of proportion.

It would not be difficult to multiply examples of this branch of architectural science, which come under the general description of proportion. Experience and habits of close observation, fostered by the practice of taking careful measurements of existing buildings of high merit, will enable the architectural student to analyse this difficult science, and so prepare him to avail himself in his own designs of the experience of others. He may be sure of this, that unless a building be well proportioned, it will fail to please, whatever may be the merits of the detail of its parts. He cannot regulate the actual size of his work, as this must depend on site, cost, and other circumstances beyond his control; but he

has the responsibility of so proportioning the parts of his design, that difficulties may be conquered and deficiencies supplied. If he be fortunate enough to obtain the element of size by being entrusted with a large building, he must not throw away so great an advantage, as has been done at St. Peter's. If, in the contrary case, he has to deal with small dimensions, he must make the most of them by an even more careful application of the science of proportion.

(II.) Constructional ornament.

(II.) We may now proceed to take into consideration the subject of architectural ornament, and, to do so the better, will divide it into two heads—constructive and decorative—dealing first with the constructional part of the subject. Architecture as a fine art is essentially a decorative art, for she has to ornament the bare construction of works carried out for utility alone. A builder may erect a house square and comfortable, but it is not a work of architecture. It may be sensible in arrangement, warm, and weather-proof, but it has no beauty, and displays no art. The latter is shown in the application of ornament. Not, be it observed, by the mere addition of carving, colour, or whatever may be thought to be ornament, but by giving dignity and beauty to the forms of construction, and by quickening the whole construction with the fire of artistic feeling.

It is important to bear in mind this distinction. Many excellent persons seem to consider that any structure may be made ornamental by plastering it with so-called ornaments, as we cover a Twelfth-cake with sweetmeats. If a railway bridge be pronounced hideous, we are told that it is easy to make it sightly by spending money on bosses, panels, and cast-iron decorations, and sticking all these on to the bald nakedness of the original design. No mistake can be greater than this. In architecture, we cannot separate the useful from the beautiful in this manner. In making his design, the architect must ever bear in mind how it is to be carried out, and in arranging his construction he must remember from the first that it must please the eye as well as satisfy the conditions of stability. If the bridge be ill-proportioned or badly placed, no amount of applied decoration will redeem it from ugliness, or entitle it to be called a work of architectural art.

If such a square builder's box as I have just mentioned is to be brought within such a definition by ornament, the ornament must be reasonable, and such as arises naturally from the circumstances of the case. A porch would thus be an ornament in this sense, or a projecting window. Chimneys may be broken into masses of agreeable aspect, or moulded into beautiful forms. The walls may be crowned with cornices, and the lines of floors marked with string-courses, or gables and dormer windows may break a too great plainness of roof. All these things are ornaments if rightly applied, and as such are among the legitimate resources of architecture. In private buildings, any added features, such as porches or bay windows, will owe their origin to their obvious utility; and if they are not reasonable, they will not be considered ornamental. For public edifices, dignity and impressiveness are also required, and so may justify the addition of ornamental features, for which usefulness cannot give a complete reason. Porticoes, turrets, and spires may come under this definition, and we cannot afford to surrender such important elements of architectural design.

Additional architectural features.

Decoration of necessary construction may also be seen in the contrivances of design, which enable the architect to group together in a pleasing form necessary details such as windows. The Mediæval architects were masters in this art, as we see by tracing their system of fenestration from Norman days to the latest Tudor. The simple lancet thus gave rise to the graceful triplet, and such groups of beautiful windows as the famous 'Five Sisters' at York. The elaborate tracery windows which were afterwards used were a development only of the system of grouping exemplified by these earlier specimens. We see also in the Italian Gothic palaces of Venice, as the Ça d'Oro, how much effect can be obtained by the simple expedient of grouping the windows together instead of dotting them all over the front with equal intervals between them. Nor were the best Renaissance architects backward in recognising the merits of this treatment. At the Farnese Palace at Rome the central loggie, though open to grave objections of detail, redeem the façade from monotony; and at the Vendramini and Camerlinghi Palaces at Venice the windows are so grouped as to be

Grouping of windows.

very pleasing. In modern architecture we have an instance at our doors of the satisfactory result of window grouping in the Travellers' Club-house in Pall Mall. In this example the contrast may be clearly seen of the two systems of uniform regularity and of partial grouping, by comparing the elevation towards Pall-mall with that which faces the gardens at the back of the club-house. The former, while well proportioned and correct, has never roused enthusiasm, while the latter has always been regarded with pleasure, and referred to as a success. Of the five windows, which the dimensions of the front allowed, three are gathered together so as to form a central group, while the other two windows are treated singly and placed about half-way between the centre triplet and the angles of the building. The centre assumes thereby an air of dignity combined with elegance, and gives a concentration of constructional decoration, on which the eye rests with all the more pleasure from the circumstance that, by grouping together three out of the five windows, a greater plain surface of wall is obtained on each side of the central composition, the effect of which is consequently materially enhanced by contrast. Further examples of results equally satisfactory might be quoted from Transitional or Elizabethan buildings, such as Longleat House, in Wiltshire, where, in spite of great regularity of plan, advantage is taken of the internal distribution of the rooms to obtain variety by duplicating windows, and gathering them into bays. Enough, however, has probably been said on this illustration of the nature of architectural ornament constructively used.

Columns.

The use of columns instead of plain piers is another instance of decorated construction, the round or moulded form being more graceful than a simple rectangle, while it is at the same time quite as useful. A column, indeed, is even more truly constructional in supporting a superincumbent weight than a pier of square section on plan; for, in case of any partial strain or settlement, the angles of the pier are the first parts to show signs of weakness and disintegration. The column, properly used, is therefore, in such cases, an object of perfect utility as well as of beauty. How great that beauty may be made by the use of beautiful materials, delicate decoration, moulding, and carving, we all know from

many a noble example. The column being constructional, its parts are so likewise. The moulded and projecting bases carry down the pressure to the ground, and cover an extended bearing surface, while above, the capital, either moulded or carved, spreads out to receive the lintel or the arch which requires support.

Brackets are, again, constructional as well as decorative, serving, as they frequently do, as springers for vaults or supports for roof-beams or principals. An extended use of such features has become common in much of our modern revived architecture; and as there is some temptation to exaggerate its use from the convenience it affords, it may be as well to suggest a word of caution on the subject. A corbel which is placed high up and near the roof, and over the centre of an arch, to carry the springing of a vault, has an obvious fitness; for no other detail would serve the required purpose as well. It is different, however, when we find a chancel-archway made of the greatest possible width at the floor level, while above, heavy groups of mouldings form a ponderous arch, resting at the springing on corbels of great projection, and, below them, we have possibly diminutive shafts, resting in their turn on smaller corbels. In such a case the corbel has not the obvious justification which applies to the other position just described, as it appears in the place of mouldings or columns, which would discharge the duty allotted to it in a manner more truly constructional and satisfactory. The Mediæval architects made their corbels, as indeed they made all their construction, beautiful, as we may see, for instance, at Ely; but, to be beautiful architecturally, there must be a good reason for their use. They will often be admissible, when so placed that they cannot easily be seen in profile, while they will appear to less advantage if brought into great prominence, as in the position I have mentioned. They serve, however, in any case, further to illustrate the constructive element of architectural ornament. Corbels.

(III.) We may now turn our attention to the decorative ornaments of our art—the carving of strings, panels, capitals, and such like details—which are not necessary except to satisfy the sense of beauty. A moulded capital will support a weight as well as, or better than, the same capital when (III.) Decorative ornament. Sculpture, Greek and Roman.

carved, and the sculptor's art is, therefore, applied to architecture not as a necessity, but as a delight.

Distinct from construction.

The Greeks, and after them the Romans, confined their imitation of nature in works of architecture to such parts of the buildings as were not constructional, as to the pediments and metopes of the Parthenon, from which the sculpture might be removed without any interference with the structure. The capitals of the Parthenon are of the Doric order, undecorated with carving. The Ionic capital, though more elaborate, was strictly conventional; and the carving below it, which enriched this order, is an added luxury which could be dispensed with. The volutes are of so regular and formal a character that they are hardly entitled to be ranked with sculptured ornament, serving rather as a template or cushion to convey the pressure of the entablature conveniently on to the column. The Corinthian order of the Greeks has always been considered to have marked the period of decline of the best period of their art, and was used for structures of less dignity than temples. Even in the Corinthian capital, however, the purity of Greek taste forbade the employment of acanthus-leaves alone. The bell of the capital is seen through its ornamentation, and we feel that the latter might be entirely removed without loss to the stability of the building. These capitals have not the richness afterwards attained by the Romans; but they are more reasonable and appropriate to the purpose for which they are used, viz. to act as transmitters of pressure from the superstructure to its supports. In the best Greek temples the ornamentation apart from sculpture was derived evidently from the traditions of wooden construction. Thus the triglyphs represented the ends of the wooden beams of the roof, and the mutules the rafters, while the guttæ have been supposed to have been suggested by the drops of rain clinging to these projections. Whatever the derivation of those details, it is unquestionable that they give both decoration and interest to the order, and that with them the architecture is independent of sculpture.

But partly determining it.

At the same time, we cannot for a moment suppose that without the latter any building would be complete in the eyes of the fastidious art-loving Greeks. A temple like the

Parthenon without sculpture is but the dry bones of perfect living art. Based upon reminiscences of wooden construction, it displays a visible roof, unlike the temples of Egypt, from which some of its details may have been borrowed. The roof ends with pediments, an invention of the Greeks, in which we may recognise the parent of the Mediæval gable, a feature destined to exercise so wide an influence on all sorts of architecture both public and domestic. It would have been easy for the Greeks to have hidden their roofs altogether, or to have hipped them back from the front, in which case, owing to the low pitch adopted, the effect of the roof would scarcely have been felt upon the front. Sculpture, however, particularly of the human figure, entered into every design of the Greeks, and for this, on a great scale, no position seemed so appropriate as the pediment. To this cause, therefore, in all probability we owe the invention of the Greek addition of pediments to the architecture handed down to them by Eastern traditions.

We find, then, in Greek architecture few, if any, examples of sculptured construction. The construction was formal and regulated by precise proportions, and the sculpture, though of a high order, like everything of Greek origin, was an addition to the structure, and not a necessary portion of it. It was, however, from its exquisite character, the chief point of artistic interest, so that the temple, though complete in a structural sense without it, was only complete in the same sense that a framework destined to receive some work of beautiful art is complete, when the carpenters have left it in readiness for its precious burden.

Contrast of Greek and Roman ornament.

The Romans carried much further than the Greeks the adoption into their architecture of the principle of decoration. They incorporated bodily with their own work all Greek traditions, but sacrificed their severe purity to richness and elaboration. Not only did the Corinthian order become a favourite, but even the Doric capital was enriched with carving. The conventional features derived from reminiscences of wooden construction, though at first recognised, soon disappeared, and friezes, architraves, and mouldings were elaborately carved, as we may see in the

order of Jupiter Stator in Rome. We may trace in these details suggestions of the carved decorations afterwards carried out by the Mediæval architects; and the same may be said of the columns, which, as at the Baths of Diocletian and the Temple of Peace, rose from the ground to the roof to support the springing of the vaulted roofs of those splendid edifices. The Romans, and after them the Renaissance architects, developed the cornice of the Greeks until it became a crowning feature of great dignity, as at the Farnese Palace. In the later days each floor had its own order and cornice, and various devices were resorted to to give increased importance to the uppermost, as may be seen in Sansovino's Library of St. Mark at Venice, where he sought to attain his object by an increased development of the frieze, and by filling it with elaborate sculptured decoration. They also used pediments for doors and windows in a way not apparently contemplated by the Greeks. It is sometimes objected that such ornaments of classical architecture, when used by ourselves, are destitute of reasonable justification, but it should be remembered that they protect the windows or doors below them from rain, and, as suggestions derived from construction, are perfectly legitimate details in the hands of the architect. They all received decoration from the Cinque-cento designers, who thus carried the practice of ornamental construction a stage further than that at which the Greeks had left it. In the Roman work we consequently find that the decoration is more essential to the architecture, strictly so called, than it was in the best Grecian work. The Romans had not the same exquisite perceptions of form and proportion as their Classic predecessors. Unable to ornament their buildings with the highest class of sculpture, they adopted an inferior but still very effective system of carving capitals, consoles, and mouldings, so as to give an air of rich magnificence to their most important works. The carving became also bolder, with more relief and undercutting, and both mouldings and surfaces which were left plain by the Greeks (though possibly enriched by means of colour) were covered in Roman days with scrolls, festoons, and similar carved ornament.

The carving of architectural details used by the Greeks

The simplicity and extreme refinement of Greek ornament.

was limited to a few simple enrichments, such as the egg-and-tongue ornament, the fret, and the guilloche. These were purely decorative, representing no natural objects, and expressing no construction. They may have followed painted ornamentation of the same kind, a circumstance which, perhaps, goes some way in explaining the low relief of the usual execution. The Greek Corinthian capital, if inspired by Egypt, lost the constructive appropriateness of its prototype. The whole of the Egyptian capital is consistent in fulfilling a constructional purpose, while with the Corinthian, as with most of the foliated Gothic capitals, the leaves are a decoration applied to the construction, and forming no part of it. In their treatment of the honeysuckle the Greeks approached the practice of imitation of natural objects, but even this beautiful detail was thoroughly conventionalised in practice, so that the carved representation was rather based upon the principles of design to be seen in the flower than on any intention of direct imitation. The fret with which we are so familiar, and which people sometimes call the key pattern, was probably of Eastern origin, and of great antiquity. It is found in Arabia and China, and even so far away as in South America, as Mr. Catherwood has shown in his description and drawings of the architecture of that country. We find traces of the influence of the fret in Runic crosses and other Celtic examples, and the Moors adopted it and made it their own in the highly complicated and decorated interlacing ornaments, to be seen, for instance, at the Alhambra. In Greek hands the fret was simple and severe, so as to differ greatly from these later developments. Of delicate relief, and of parts small in dimensions, it gave a slight decoration to the surface without sacrificing the effects of breadth and simplicity, which are exemplified in the best Greek work. The same may be said of the other carved ornaments used. Imitation of nature was eschewed, though the Greek love of beauty could not have been insensible to its charms. A simplicity of treatment was followed, and though the ornaments employed were doubtless suggested by the honeysuckle, the lotus, the egg, or the rose, these objects were in no case presented in such a manner as to be in any way reproductions.

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Greek execution aimed at smoothness and refinement, and this was carried to such an extent that to Northern natures there is something deadening, even while fascinating, in the elegant repose and finish of Greek architecture. In presence of it we find something wanting; and we perhaps think we may trace in it the same kind of epicurean fastidiousness, which has caused some fine gentlemen to think every indication of vigour or strong feeling vulgar and ill-bred. As a natural result of this state of things, Grecian architecture will excite admiration rather than enthusiasm. Its ornament, with which we are now especially dealing, was the work rather of the deliberate and accurate geometrician than of the eager and impulsive artist. The refinement of the details and the purity of the principles on which they were designed are, however, worthy of all study on the part of the young architect; for, though the day is past when it was thought reasonable to copy Greek temples, no architecture can afford to disregard the lessons which a careful study of Greek principles of design can give.

The greater luxuriance and prominence of Roman ornament.

For Roman ornament, on the other hand, the orders were utilised, and in the process lost the severe grandeur which belonged to them when applied only to the temples of the gods. Porticoes and columns were now applied to all sorts of buildings, and consequently some elasticity became necessary. The less chastened taste of Rome called, moreover, for a greater amount of decoration and more variety in its treatment. In positions where the Greeks left plain surfaces, and then enriched them with delicate ornament in colour, the Roman carver was called in to reproduce in actual relief that which had been only suggested by painting. The Corinthian capital became richer, and crowded with leaves, which imitated the acanthus with more directness than had as yet been usual. Great richness was achieved in this manner, and, whatever may be its faults, the Corinthian capital as worked out by the Romans was a very beautiful object. In it, however, the constructional element is so overlaid that it is scarcely apparent, and the angles of the capital more particularly seemed to call for support. Volutes springing from the bell behind the leaves project at the corners to support the abacus, and these seeming supports

were increased and strengthened until the result was the composite capital. This is, in fact, an Ionic capital, placed upon the lower half of one of Corinthian design, composed of acanthus leaves only. The attempt cannot be praised as successful, and was not destined to be generally adopted. In Roman ornament, as distinguished from the Greek, we find more self-consciousness. In the Greek the carving was quite subsidiary to the main design of the architecture, accentuating its details, but not in any way obtruding itself or interfering with the exquisite sculpture, as apart from mere ornament, on which the Greek temple-builders were able to rely. In Roman work the carving is bolder, more prominent, and in many cases of great beauty of execution. We have, besides the usual carving of the orders, rich and flowing scrolls, festoons, arabesques, figures of boys and animals, mingled with foliage, &c. All these specimens of decoration are examples of architectural ornament not called for by construction, or in any way illustrative of it. They often possess great beauty both of carving and modelling, and have furnished precedents to the Renaissance architects, who based their revival on Roman precedents. The beautiful frieze of Sansovino's Library of St. Mark is a case in point; while at the Certosa and many other buildings the sculptors worked, not only in the Roman way, but with the Roman habit of carving in relief delicate ornament more fitted for execution in colour. Such are the beautiful arabesques of Agostino Busti and his pupil Brambilla at the Certosa, and the delicate pilasters of the Ducal Palace at Venice by Benedetto and Domenico da Mantua. The Renaissance designers carried onwards the Roman taste for architectural decoration, and stamped upon it the impress of their individual tastes, so that we find much variety and difference of merit in its various examples, and may see how much scope for artistic skill and talent can be given in the style.

The Renaissance ornament.

Having now explained the nature of decorative architectural ornament in the works of Greece and Rome, it remains to consider its application to Mediæval buildings. This was more completely a system of ornamented construction than those which have just claimed our attention. The

Mediæval ornament eminently constructional.

Gothic architects did not consider their buildings as frameworks for sculpture, but, on the contrary, subordinated sculpture to architecture, and kept the former in strict control.

English Gothic.

In Norman ornamentation we find traces of transition from Romanesque and even Roman work: but these soon died out, and the decoration of English Gothic, at any rate, became original. The dog-tooth and the ball-flower replaced the carved mouldings of Greece and Rome, and the former, it may be remarked, enriched hollows, whereas the latter decorated surfaces. To ornament plain spaces, where the Romans would have used scrolls and figures, the Gothic architect employed such diapers as we may see at Westminster. Capitals were carved conventionally, and afterwards with imitation, more or less close, of natural leaves. Cornices were enriched by carving placed in the hollow members, and bosses of a most elaborate design, as at St. Stephen's, Westminster, gave richness and interest to the groined and vaulted roofs. Of Gothic carved ornament that of the thirteenth century is the most perfect, both in principle and execution. In the foliage of the so-called Early English style, which then prevailed, we find a conventionalism as thorough as that of the Greeks. The capitals are not so decorated that their fitness for supporting weight can be called in question, while the foliage is exquisitely balanced, and the gradations of light and shade are beautifully contrasted. Where scrolls were introduced into spandrels of arcades, as at Stone Church, in Kent, we find a vigorous outline in strong relief, with the conventional foliage of the period growing out of a central stem. Afterwards a more imitative principle prevailed. Leaves copied from nature were used often with great skill, but, as imitation advanced, art retired. To imitate nature is, indeed, a hopeless task for the architect, even if it were desirable in itself. The charms of flowers and leaves, for example, are their delicacy and colour and smell, none of which are within the reach of imitation in architecture. The most perfect carving in stone is coarse in comparison with a daisy or a rose. The subtle colouring of nature is unattainable by the architectural decorator, even if we could tolerate his attempts, while the

sense of smell cannot, of course, be gratified. Moreover, if natural foliage be placed where its duty as a part of the architecture is to sustain a weight, as in the capital of a column, the incongruity becomes at once obvious; and of this the Mediæval architects were so well aware that, where they imitated nature very directly in their carved foliage, they discarded the idea of construction, and stuck bunches of leaves against a central bell which showed itself through the spaces between the leaves, thus declaring itself competent to discharge the duty for which the foliage was clearly unfit. In such cases the carved flowers or leaves are pieces of extra decoration applied on the same principle as the festoons and garlands of the Renaissance.

French Gothic.

The French architects indulged in a more extended use of ornament, both constructive and decorative, than their English neighbours. This may be seen at Amiens, Rouen, Chartres, and many other places. In their grand entrances and recessed porches the sculpture even overpowered the architecture by its surprising richness. It was nevertheless intended to be subordinate, and even the numerous figures are confined by lines of mouldings and niches, so that they appear as items in a general scheme of elaborate architectural decoration, rather than works of art in themselves having an individuality of special excellence. In the prime of Gothic architecture there was no necessary feature of construction, which was not turned into a thing of beauty by appropriate decoration. The banded shafts, sometimes of marble, with separating mouldings, often carved, adorned the doorways. Canopies with crockets richly carved covered the niches of the saints or served as a finish to arch or window. Diapers of exquisite arrangement hid any undue bareness of surface, while more ambitious sculpture adorned the shrines or covered the backs of screens with Scripture subjects, depicted in a manner calculated to arouse fervour in the worshippers who thronged these wonderful buildings. Although the buildings would doubtless remain beautiful, if every piece of decorative ornament, strictly so called, were removed, we feel in beholding them that the ornamentation is so charming in itself, and so appropriate to the structure, that the latter could not be complete without it. The composition

now perfect, would be mutilated and incomplete; the harmony of a superb symphony in stone would be disturbed.

(IV.) Conclusion. Adaptation of old principles to modern needs.

(IV.) In conclusion, we may sum up the results at which we have at present arrived. Architecture still teaches us the lessons derived from the past. We have not to invent a new style, but to do our own work for our own day in a spirit of appreciation of that which has been done before. Our architecture, like that of old, must be based upon construction, but, like it, not on construction only. We have to cultivate also the artistic love of beauty in art which shrinks, as if by instinct, from a mean or unlovely thing. In this way the work of a mechanical age may yet become grand and impressive, without ceasing to be scientific. We must not call on mankind to surrender any modern advantages. They would not listen to us if we did, nor ought they so to do. They will listen, however, if the architect, while telling them of the glories of the past, can nevertheless point out to them a more excellent way. That which has been done can be done, but with different circumstances different needs arise.

The temple was to the Greeks a national symbol as well as an expression of faith. Private life was little thought of in comparison with the exigencies of public duty. In the same way the solemn cathedral of the Middle Ages was the all-in-all of religious and social life. Erected for the highest of purposes—the worship of the Eternal God—it was itself the great teacher of its age. The people, ignorant of letters, found an eloquence that was irresistible in its sculptured stories of Holy Writ. The virtues of the Christian life, the joys of heaven and the pains of hell, were found here portrayed in what was meant to be truth. The whole building, dominated by one grand idea, impressed every imaginative faculty in man, and led him, as it were, from earth to heaven. Our age is not so dependent on architectural teaching, and our art, it may be, can never again be precisely what it was in the Middle Ages. The increased knowledge of the world makes it day by day more exacting and more critical. At the same time, responsibilities press upon us which were unknown in older days. Other duties may be more urgent even than cathedral building, and the simple willingness of

olden days to take things on trust is gone for ever. Much of the ancient ornament in which we delight would consequently fail to appear reasonable or satisfactory, if now produced. We may preserve it carefully, and ought to do so, but, unless we can satisfy ourselves that we should work on the same principles of thought, we should beware of imitation. The general principles of art we can study and apply, but a truthful sentiment must underlie our work, and failure is before those whose only aim is reproduction.

The scientific part of Architecture will thrust Art out of the field, unless she can show proper credentials for respect. This she can do by pointing out that, as architects of old could design with beauty and build with truth, their successors can do the same, and that, without the softening grace of art, the world will grow harder, drearier, uglier each day as years roll on.

Architecture, therefore, may still look forward. As a science she takes utility for her guide, and acknowledges rules which the experience of generations has dictated. As a Fine Art she is ready to beautify the work of science, and add grace to convenience by appropriate ornament. She seeks such ornament, not by decorating forms already designed in contempt of all principle but that of a narrow utilitarianism, but by the thoughtful study from the first of what is really necessary, and how it can be united with architectural effect. A building which is meaningless can never be beautiful, and ornamentation applied in mechanical profusion to an ill-proportioned and merely utilitarian structure is not architectural ornament.

LECTURE VII.[1]

ARCHITECTURE ALLIED WITH COLOUR.

Application of colour.

HAVING now discussed the forms of architecture with reference to design and proportion, there yet remains another aspect in which our art should be considered. We have seen that its scientific side may be tested by technical rules, and that it becomes artistic by the right application of ornament. The latter has further been examined under two heads, the Constructive and the Decorative. In respect of decoration we have found how large a part sculpture has played, and ought to play, in architecture. It remains for us now to think of Painting, that lovely art which provides enjoyment for all, there being no one, or next to no one, insensible to the charms of colour.

(I.) EXTERNAL COLOURING. Controversies on the subject.

(I.) The sculpture of ancient masterpieces, whether Greek temples or Mediæval cathedrals, has seemed so necessary and so integral a part of the design, that a general consent has accepted the necessity of co-operation between the sculptor and the architect. The latter has raised buildings which the former has filled with interest, to so great an extent that the question has arisen whether the sculpture has not dominated the fabric, and reduced the architecture to a secondary position. It has been otherwise with the application of colour. It has appeared to many that both sculpture and architecture should be monochromatic, and that their purity of effect is lost on any invasion of their domain by the art of colour.

Impracticability of absolute

To such thinkers a building is best executed in a colourless material, and an architect should be as careful in this

[1] It is right to repeat that this Lecture, which would have been the fifth in the Royal Academy series, although left apparently ready for delivery, did not receive final revision.

respect as the sculptor, whose greatest grief is to discover a vein of colour in the virgin marble which he prizes for unspotted whiteness. Of such a principle, as applied to architecture, it may be said at once that it is impracticable. Such absolute freedom from the influence of colour of some sort is, at any rate, not to be obtained in our climate, which stains with damp, corrodes with smoke, and darkens with fog, the noblest works of architectural art. But, indeed, even in the sunny countries of the South the difficulty, though lessened, remains essentially the same. In Greece, and even in Egypt, the atmosphere counts for something, and the architect's work assumes shades, in consequence of climatic influences for which he may scarcely have been prepared.

colourlessness.

Moreover, taking the monochromatic theory strictly, we may ask, What are the points which the architect is first bound to consider? Undoubtedly the lights and shades of his work. He constructs, so to speak, a composition in white and black. But we know that these terms are only used for convenience, and that there are no such colours as white and black. We must have in our architecture (however carefully constructed of colourless material) high lights and half-lights, grey shades, medium shades, and dark shades, so that the effect shall be due to well-displayed chiaroscuro—in itself a question of tints, if not of colour.

Natural lights and shades.

But, indeed, on this our composition of black and white, the sun confers hues of his own, at one time heightening its outlines with the beams of hope, as he rises upon a sleeping world, at another gilding it with a glorious sadness of memory as its surfaces reflect the gorgeous redness of the setting luminary. Between those two extremes there are many gradations, so that in the climates of the south it may be said of architecture that, like the mythical chameleon, she is ever changing her aspect of colour. Even amongst ourselves, though the shades are more sombre, our buildings are no more independent of these atmospheric tints of colour.

Colouring of sunlight and atmosphere.

Whatever material may be used by us, particularly in London, it soon experiences a change. Time, which in other lands seems to chasten with a loving slowness, becomes here a tyrannical and eager solvent. A few months influence

our work, and effect that which centuries have failed to do to the great monuments of architecture on the banks of the Nile. Where the architect desired light, he gets stains of grimy blackness, and the best executed carving becomes indistinguishable through a veil of dirt. Even in these cases, however, colour plays its part, and between the extremes of light and darkness we may recognise the value of middle tints in giving scale and grandeur to such an edifice, for instance, as St. Paul's Cathedral. These effects are, however, it must be admitted, accidental in the sense of unforeseen, and Nature's colouring differs therefore from the actual application of colour to architecture, which is the question now under our consideration. If, however, we admit that a building gains in effect by colour, whether resulting from natural or artificial causes, it becomes evident that the whole question is one of measure and degree. In analysing the effect produced by an architectural front of a building it is found that the lights are produced by the breadth and prominence of the general forms, while the shades result from the distribution of the voids, such as windows, niches, arches, or recesses. These shadows will necessarily differ according as the sun's rays are more vertical or oblique; in other words, according to climate. The balancing of lights and shadows in an elevation is of so great importance that I should advise every young architect to plan his building in black and white, before thinking of colour or the subtler graces of detailed composition. In so doing let him not deceive himself, as inexperienced designers are too apt to do. Deep shadows are easily shown on paper; but, bearing in mind the axiom that an architect has to make pictures, and not to draw them, he must be careful so to arrange his plan and the masses of his design, that the shadows he depicts on paper shall really emerge into being, when the searching effects of daylight come into play.

Artificial colouring.

The study of light and shade is therefore one of the greatest importance, but it must not be thought that colour has no part to play in our architecture. It may be used in two ways: first, by the employment of coloured materials; and secondly, by the direct application of local colour to previously existing architectural forms. It is now con-

dered that in one or other of these ways colour was used n every kind of architecture.

In Egyptian and Greek architecture.

In Egypt it is in many cases as evident now, as when it was first used thousands of years ago, while, though its traces have almost disappeared from the Parthenon, the most careful inquirers into Greek architecture are disposed to admit that the building was originally decorated with ornament in colour —such ornament, in fact, as we found in the last Lecture to have been translated into carved stone by the more vigorous, if less refined, taste of the Romans. There is, however, a great difficulty in judging of the use of colour among the Greeks; for it is of the essence of this kind of ornament that it may be easily applied at any time after the completion of the building, so that the mere discovery of remains of colour on the columns, architraves, and cornices of the Parthenon is but one link in the chain of proof that such ornamentation formed a part of the intention of its original designers. The exquisite beauty of the curves, outlines, and details of the best Grecian temples is, indeed, such that to many of us the addition of colour will appear unnecessary, and, being unnecessary, an intrusion into perfect harmony of a discordant element. To this feeling we are the more inclined, because in Egypt, where colour undoubtedly exists, the circumstances are altogether different.

We have, there, in the gigantic columns and huge masses of superstructure a rude manifestation of vigour, which is heightened rather than diminished by the addition of brilliant colour. The sun, moreover, while deepening the shadows, will bleach the exposed surfaces which produce the high lights, thus making the contrast so sharp as to be almost painful. Under circumstances like these coloured decoration presented itself as a welcome expedient to give texture to the surface, tone to the shades, and scale to the composition as a whole. There was here no question of outlines so exquisite that the least interference would destroy their charm—of curves so subtly described that a coarser apprehension than that of the Greeks would even be unconscious of their existence. We can, therefore, admit with greater alacrity the justification of colour as allied with the architecture of Egypt, than with that of Greece.

In Roman architecture.

We do not know much of external polychromy in Roman works. Columns of marble and granite were, doubtless, employed, but the application of surface decoration was, as we have already seen, the work of the stone-carver rather than the painter. In the interior of Roman buildings, such as the Great Baths, a free use of colour gave magnificence to the vaults and spacious halls which adorned those splendid establishments. Costly marbles and mosaics met the eye of the spectator on floors, walls, and ceilings, and fresco paintings by skilled artists covered spacious surfaces reserved for such high-class artistic decoration. Those who have seen the ruins of these stately buildings at Rome will not need to be reminded of their extent and original splendour. Others may be glad to know that St. George's Hall, Liverpool, one of the grandest rooms in England, fairly represents one only of the halls of such a building as the Baths of Caracalla, and that the whole mass of the Liverpool edifice, including the law courts and accessories, is less than one-fourth of the total size of one of the great Baths of Rome, which might compare with our largest buildings, such as the Houses of Parliament. In private buildings we know from the examples at Pompeii that the Romans indulged freely a taste for colour in the internal architecture of their dwellings, while they cared little for their external appearance, and the same treatment was in all probability adopted in respect of more monumental structures.

In Romanesque and Italian Gothic.

As the traditions of Classic art waned before the advance of the Romanesque and Italian Gothic styles, there was an increase in the adoption of colour as an element of effect in external architecture. The columns, either isolated or attached to the walls in doorways or arcades, supplied a local colour in contrast with the general mass. Panels were filled with coloured marbles, often disposed in geometrical patterns, and a system of incrustation of plain walls with slabs of coloured marbles came into use, particularly at Venice; while in other cases horizontal courses of marble were built in the wall, either in colours designed to contrast sharply with the intermediate courses of similar material of a lighter hue, or even in combination with brick-work.

We have instances of these several methods of applied

colour at Florence, Pisa, Sienna, and at St. Mark's, Venice. In the former cases, and in many others, the dark horizontal courses exercise a striking effect upon the architecture of the building. Whether that effect be either legitimate or pleasing will remain a question of individual taste. Wherever the horizontal lines are emphasised as strongly as is the case in these buildings, the vertical or Gothic spirit is sacrificed, inasmuch as the local colour of the level courses is more powerful than the vertical mouldings of the architecture. The scale is, moreover, injured, and the building is made to look smaller than it really is. Whatever, therefore, may be the beauty of the materials, and the occasional merits of the external polychromy of Italian Mediæval building, the propriety, in an architectural sense, of the methods above described may be questioned.

The same doubts may be expressed more strongly as to the practice of veneering walls with thin slabs, a method which concealed the real construction, and became defective on the slightest settlement of the building. When the system of incrustation was applied to arches, there was necessarily more difficulty than in placing slabs against a vertical wall, and consequently arches so treated have been the first parts to give way to the effects of time. Yet incrustation, when applied to sunk panels, spandrels of arches, and other positions well defined by architectural lines, on which no strain can well come, was sometimes used by the Italians of the Middle Ages with excellent effect under the bright sun of their delightful climate.

The Ducal Palace at Venice.

A love of colour is so indigenous in Italy that the desire to ally colour with architecture, even externally, appears natural in that country, and, when it was introduced into the actual construction of the building the errors and difficulties of incrustation were avoided, while pleasing effects of contrast were obtained. In the upper storey of the Ducal Palace at Venice the appearance of a reticulated pattern, such as might be given by a boldly designed diaper, is obtained, as well as a pleasing variety of colour. In this case the coloured marble blocks are built into the wall, and so form an integral part of the building. Such decoration is not, of course, of any high artistic merit; but it may assist

the architect in practice in lightening the heaviness of great masses, for which a more direct architectural treatment may be impracticable. The square, box-like heaviness of the upper storey at Venice would overwhelm the traceries and arcades beneath even more than it does at present, unless its weight had been somewhat disguised in appearance by the variegation of the surface by colour. In other Italian examples external colouring was obtained in a similar manner, viz. by making the materials of the building themselves the vehicle of colour; and marbles, bricks, and terra-cotta were employed in this way, often with considerable success.

Giotto's Campanile.

The most beautiful example of external polychromy in Italy is, undoubtedly, Giotto's famous campanile at Florence, a building designed with the technical skill of an architect, and with a painter's love of colour. In this celebrated work good proportion goes hand-in-hand with decoration to produce a pleasing *ensemble*, and of the two qualities the former has, I think, the larger share in the successful result. We could part with the colour rather than with the graceful outline and well-balanced arrangement of the details, and might even admire the tower if it were painted all over of a uniform tint. Much beauty would, of course, be lost, but much would remain. The coloured decoration of Giotto's design heightens the effect of the architectural detail, without destroying it. The wall surfaces are rendered beautiful by colour; and being cut up into small spaces, the constructional objections to veneered panels do not obtrude themselves, the panels being well defined by the architectural lines of the composition. The power of colour to supply deficiencies of architecture may be seen in the lowest storey. The possible dimensions of this portion were doubtless prescribed by the exigencies of position, the tower being situated in the heart of a great city, close to the cathedral, where ground-space was much circumscribed. A Northern architect would have expanded the basement-storey by means of buttresses or other projections, which would have given both real and apparent stability to the tower. To the Italian this treatment was not natural; but the appearance of the design is made much more satisfactory than it would

otherwise have been by a pronounced horizontal treatment, carried out principally by means of colour, which, by darkening the whole mass of the base, confers upon it a solidity of appearance, in excess of that which its architecture alone could secure.

St. Mark's, Venice.

In speaking of architectural polychromy in Italy, it is impossible to pass over St. Mark's, Venice, a building glowing within and without with colour. Still, in respect of colour externally applied, St. Mark's is too much an exception to all architectural rules, to be referred to as an illustration of any principle except that of the charm of colour generally. If we take away this charm from St. Mark's, we leave little to admire. Its size, not in itself great, is frittered away by an unnecessary multiplicity of unmeaning parts, which, in some cases, conceal the actual form of the building. Applying to St. Mark's the same test lately suggested for Giotto's Campanile, we feel sure that, if the former were of any one tint, undecorated with colour, few would care to see it. This circumstance has been brought out very clearly in recent discussions. The colour we admire in the west front of St. Mark's is not entirely due to the variegated marbles, mosaics, and gilding, which contribute to the general effect. Much is due to the operation of time, ripening some tints and subduing others, and throwing over all the softening and harmonising influence of age. This would, of course, be lost, or, at best, materially diminished by even the most conservative restoration, and it is, therefore, earnestly to be hoped that no interference will be allowed unless under the pressure of actual structural necessity.

In Northern Gothic.

While the designers of Italian Gothic worked thus in constant alliance with the painter, the Northern Mediæval architects were more self-reliant. Although far from disregarding colour, as we shall presently see in speaking of interiors, their work was more purely and sturdily architectural. A Gothic cathedral, like York or Lincoln, furnished its own colour, and seemed to disdain adventitious aid. The mass broken up by projections, each casting its shadow on the varied surface, made up by aisles, roofs, transepts, and chapels, left but little scope or place for any good use of colour, if, indeed, it had been available. In buildings, in

which colour appears, its introduction seems to have been due to local necessities rather than to any desire on the part of the architects for colour *per se*. Thus, where stone was difficult of attainment we find the use of brick, with stones, sparingly used for dressings and quoins, and, in places where stone could not be got, brick takes its place altogether. Flints also were used in conjunction with stone, and were often arranged in panels for surface decoration, recalling, though in a different material, the method of Italian work. This flint decoration is, perhaps, an evidence that the architects desired effects of colour, or rather of contrast, and would have indulged their taste more freely, had better opportunities been afforded to them. If this had been done, we should probably have seen some decided modifications in the vigour of Northern Gothic work.

Application of actual painting to the walls.

All the methods already discussed, as posterior to Egyptian and Greek art, have given colour to Architecture through construction, and are altogether distinct from any application of painting to the walls. That this was done, both in Italy and elsewhere, there can be little doubt, though the evidences of it, being perishable, may have for the most part vanished. In the case of St. Mark's, in the external decoration of the large spaces over the doorways, which were executed in a lasting material like mosaic, the designs still remain, and similar effects were, no doubt, sought for in less ambitious structures and in a less permanent manner. At the present day the national taste shows itself in the rude paintings, often of an amusing description, seen in many a village; and even in Northern Europe, if we may credit the illustrations of illuminated manuscripts with any amount of literal accuracy, paintings were not uncommon on the outsides of houses. This is consistent with all we know of the prevalence in the past of a general love of rich colour. Such a taste was displayed not only in all kinds of ornamentation, but also in arms and dress and all that related to personal adornment, so that it is only natural that we should find architecture subject to similar influences.

(II.) I have thus far confined my remarks to the application of colour to external architecture, because, with refer-

(II.) INTERNAL COLOURING.

ence to interiors, no doubt can exist as to past practice; or of the indispensability of colour allied to architecture, if the latter is to put forth all her powers. In the cheerless countries of the North, brightness and cheerful colouring in our houses are more necessary than in places where men live to a great extent out of doors, and see more of the exterior of buildings than we do. It may be that, in the latter case, external polychromy is more reasonable than with ourselves, and that our own attempts to combine colour with external architecture should be subject to considerable limitation. With reference to interiors, however, there can be little doubt that one of the chief studies of the architect should be how to apply colour to his work artistically and reasonably, without sacrificing the more strictly architectural principles of design. This use of colour to heighten architectural effect is, in fact, one of the most legitimate weapons in the hand of the modern architect, in his warfare against the bare coldness of interiors, which used to be thought 'classical,' and the depressing monotone of 'churchwarden's whitewash.'

Stained glass.

If any evidence be required of the love of colour by Mediæval architects, it is to be found in the invention and use of stained glass. Before this period windows were few and small, necessary expedients for admitting light and air to the interior, but of simple design, and but slightly accentuated by architectural treatment. In private houses they were seldom glazed, but were closed at will by means of shutters.

The effect of its use on architectural form.

When, however, stained glass came into use, its decorative effect in architecture was so evident, and became so fully appreciated, that the very forms of the architecture were modified, in order to afford due opportunities for the display of this beautiful example of the application of colour. Windows now became, in fact, the chief decoration of the building both internally and externally; for though no effect of colour could, of course, be visible on the outside, the adoption of large windows led to the use of the elaborate tracery, which is so characteristic and charming a peculiarity of Gothic architecture. Of such traceries, the great rose windows of French cathedrals furnish striking examples; some

of them, as at Chartres, being designed massively with purely geometrical forms, while others, as at St. Ouen, display the fancy of the designer for flowing outlines, with an intricacy of detail, which, however wonderful, seems fitted rather for some plastic material than for execution in a hard substance like stone. Such windows, however, when filled with stained glass are very beautiful, and recall to the mind the charming effects of the kaleidoscope. In French architecture we trace more readily than in English the influence exerted on the architecture by the adoption of stained glass; for the enlarged clearstories so common abroad did not find equal favour in this country, where stained glass was more costly and less easily obtained.

The excessive height of French cathedrals æsthetically considered.

One result of the adoption of an enlarged clearstory was the development of height which distinguishes foreign cathedrals from our own. We all know, for example, how Amiens cathedral stands up like a giant from among the buildings of the town. It may, however, be questioned whether undue height be not one of the worst defects from which architecture may suffer. In respect of the exterior, we miss in such buildings as Amiens the well-balanced proportions of the best English designs. Towers are dwarfed by the great height of the nave roof, and the buttresses become exaggerated by obtruding too forcibly their constructional functions. Great dimensions are always impressive, but in almost all cases exaggerated proportions in one direction involve a corresponding loss in others. If we take Salisbury Cathedral as a typical English example, we shall find that in it a well-contrasted proportion of its parts, all of dimensions moderate enough to allow of due prominence being given to pinnacles and gables, leads up to the crowning effect of the exquisite central tower and spire. As an architectural composition such a structure is far more satisfactory than the gigantesque attempts at enormous height. However beautiful, therefore, the great stained glass windows may have been in themselves, their influence on architectural form was by no means an unmixed good, and even the interiors did not always gain by their adoption. Great internal height is, indeed, specially impressive in a church, as tending more than any other circumstance to remind man of his insignifi-

cance before his Maker. Nowhere do the worshippers appear so small and unimportant as in the great French churches. In an artistic sense, however, the too great height of an interior is a misfortune, as it impairs the effects of width and length, and thus sacrifices the idea of spaciousness. All the various proportions should bear a ratio to each other, and the exaggeration of one of these will alter the value of another, as we see in the case of a room doubled in width by alteration without any increase of height. In such a case the effect of lowness will be produced, though no change has been made in that dimension.

Mural painting of a high class of art.

I have dwelt somewhat at length on this part of my subject, not only because the question of proportion is of great importance, but also because the adoption of such changes in the forms of architecture as are here described proves conclusively that love of colour on the part of the Mediæval architects was no less than that displayed by their predecessors in Classic times. It may be admitted that the art of much of the stained glass used by them was defective; but this only strengthens the argument in favour of colour, considered on its own merits alone. It was not every church that was fortunate enough to secure the co-operation of artists in painting, such as those who worked in the beautiful Italian Gothic church at Assisi. Here we find an architecture of pure forms decorated with paintings of high artistic excellence. The church is built in two storeys, with nave, choir, and transept on each floor. On every part of the floor, walls, and roof colour is allied to the architecture. Paintings by Giotto, Simone Memmi, and others of their school, make the walls eloquent of saintly acts and Christian virtues. Such decoration not only powerfully aids architectural effect, but works hand in hand with architecture as a teacher. It was not a mere decoration of marbles polished by mechanics, and arranged in geometrical order, but it was an application of art in its then highest development to the service of the sanctuary. Architecture, whatever its impressiveness, stops at a certain point, from which the painter may take up the sacred torch, to expound upon his walls the deep things of life, and point the way to heaven. To carry out such a work in such a manner calls at all times for

sacrifice on the part of the artist. He cannot have the architecture made to display his paintings to the best advantage. He must, on the contrary, design his work with reference to the position it must occupy, and the light it can obtain, which will not always be that which he might desire.

Its neglect in England and its great value.

The domestic feeling prevalent in this country has perhaps been a stumbling-block to art. Our painters work with high finish for small circles of appreciation. The days when a great painter, surrounded by his assistants and pupils, could undertake a grand application of colour to architecture in the spirit of Giotto and his school, have passed away: and it would almost seem that this great desideratum is altogether ignored by the apathy of our public men in regard to art. If it were otherwise, there can be no reason why in this rich country our people should rest satisfied with an architecture of bare walls, or hand them over for colour to the decorator and paperhanger. As we look around the rooms of the Royal Academy, and observe the great spaces, which are never covered with pictures for exhibition, and the bare ceilings and undecorated walls of our official rooms, the question arises whether the Royal Academy might not in its own house show some practical appreciation of the doctrine of the association of the arts of painting and sculpture with architecture. Giotto, while designing architecture with the eye of a painter, never forgot his architecture in his painting. His works charm us by their directness and the simplicity, which were necessary in appeals to men who could not read. These had to be taught through the eye, and their feelings and consciences to be stirred by direct representations. These conditions do not, of course, exist among ourselves, and the lessons which Giotto taught with plainness of artistic speech would possibly fail to touch modern society. Surely, however, the latter need not, therefore, be insensible to the employment of the highest art attainable in our public buildings, both civil and ecclesiastical. As to the latter, there will always be divergences of opinion founded on differing theological views, and objections will be urged which, being founded on religious principle, will command respect, though they may fail to obtain our assent. Admitting, how-

ever, to their fullest extent the danger of touching holy things with hands not always pure or strong, an age which tolerates windows full of sacred subjects, often but too ill-drawn and composed, might surely turn its attention sometimes to a high-class mural decoration, and encourage our best painters, who, I feel confident, would readily respond to work, as did Giotto, in concert with the architect.

(III.) Practical possibilities in England. External polychromy by variety of materials.

(III.) We have now seen that the alliance of colour with architecture has always been intimate, and it only remains for us to consider how far this connection can be retained in our own work. And, in the first place, we may inquire as to the external colouring of our buildings here in England. We may, I think, at once dismiss any question of applying actually painted decoration to our external architecture, not only on account of its perishable nature, but also because, although such surface brightness may be tolerable when toned down by the brilliant sunshine of Egypt or of Greece, it would be apt to appear inappropriate and tawdry in our less favoured atmosphere. It is different, however, with colour constructionally applied so as to form a part of the actual structure of the building. Such polychromy is at least reasonable, always provided that the materials be selected in accordance with common sense. Thus, in contrasting red brick with stone, both should be used in their appropriate positions, for which their constructional qualities specially fit them. Terra-cotta also should appear in its own character, and not as an imitator of other materials. Site and surrounding circumstances should also be taken into account in determining the question of colour in respect of architecture. A building of dark red may, for example, please when placed among the verdant foliage of the country, while it would appear dull and sombre in the smoke-laden atmosphere of London or Manchester. In all cases, however, a careful and restrained employment of coloured materials will enable the architect to emphasise his effects of light and shade, as, for instance, by using for recesses and panels darker materials than those of the general face of his work. The shadows of the cornice may be deepened by such means as at the Town Hall of Perugia, where the spaces between the cantilevers are filled in with a dark marble. Polished

marble is a thing forbidden to us by our climate for external use. If we require similar effects, we are, therefore, practically limited in our resources to glazed pottery and granite. Pottery can give us beautiful tiles and bricks, but the former are more suited for internal than external use—at any rate, on any extended scale. Tiles may perhaps be used sparingly in panels and spandrels, and such like positions, but they are open to the objections of principle and construction, which apply to veneering applications of colour. Glazed bricks may, however, give a more satisfactory result. The difference between a wall built of white glazed bricks and large surfaces covered with tiles applied to the walls is all in favour of the former. This may be seen any day by comparison of walls built in the first method with the tile-covered surfaces of the station areas of the Metropolitan Railway. Now that bricks can be made with a beautiful surface of various tints, hard, dry, and durable, they may be reckoned by the architect as one of his most ready means of indulging in the experiment of external polychromy in towns, and it would be interesting to have some such experiment tried on a scale sufficient to test its merits. The costliness of granite must always make it a luxury to be used sparingly, as for doorways and places where there is much traffic and wear and tear. Such use of it is not only constructionally legitimate, but also affords points of colour on which the eye rests with pleasure. If, however, granite be applied to a whole façade, and yet so applied as not to give a general effect of colour, the result is unsatisfactory. The attached columns at the Carlton Club-house in Pall Mall are a case in point, and we can estimate their architectural value the better from the resemblance of this building to Sansovino's Library at Venice, where the columns do not differ in colour from the rest of the building. The granite columns appear isolated and spotty, marking a façade which should be governed by the horizontal principle with strongly defined vertical blots. If the entablatures of the orders had been executed in a darker material, this defect might have been avoided, and a more harmonious effect of colour obtained; but, having regard to the nature of the whole composition, a more pleasing result would probably have followed the use of light

materials for the columns and entablatures, with a darker construction for the windows and recessed portions of the front. While we may reasonably desire to enliven the too often cheerless streets of our great towns with the charms of colour in alliance with architecture, it must be confessed that the task is one of great difficulty; and I may perhaps caution my younger hearers against a fashion, but lately become prevalent, of dotting our buildings with little bits of polished granite or marble, applied without constructional propriety or any connection with the architecture. Sometimes these so-called ornaments project in such a manner as to suggest instability, as when they assume the appearance of petrified cannon balls stuck against the walls by means of some concealed agency, which may fail at any moment.

The most important modern building, as far as I am aware, in which external polychromy on a large scale has been attempted, is the new Opera-house at Paris. As the architect is happily amongst us, being one of the foreign honorary members of the Royal Academy, I must abstain from any criticism of this remarkable work while commending it to your observation. You will find in it at least a public building carried out in a manner very different from the niggardly spirit which limits any such attempts amongst ourselves; and, while you will decide impartially as to the praise or blame which may be due to it in your judgment, you will have the advantage of seeing an example, in which the architect appears to have had full power to secure the additions of colour and sculpture to his architecture. One thing may at least be said without infringing the rules which forbid criticism of contemporary works. A building should declare its purpose, and, whatever may be the merits or demerits of the Paris Opera-house, no one could mistake it for anything else than what it is.

The fatal difficulties of London atmosphere.

Another remark may also be made, namely, that we cannot conceive it to be possible for an architect to venture on a similar attempt in London as long as we are contented to dwell in a smoke-laden atmosphere, full of dirt, and destructive in its effect on our architecture. It is as idle to talk of colour in our buildings when we cannot see them, as to

declare our appreciation of fresh air, when we systematically poison it with the smoke and products of combustion from millions of fires. If Science would help us, how many an artist's quarrel with her would be forgotten; for in a brighter atmosphere a more general appreciation of art would soon appear. As matters now stand, the task of the architect in large towns is disheartening in the extreme. Far from daring to think of any delicate application of colour, he has to face the fact that his building, before it has even left his hands, will be defaced by stains and patches of blackness. The machine-made ornament of the plasterer and the high-class bas-relief of the sculptor will be concealed by a dull uniform of sooty dirtiness. A building of my own, which a few years ago showed in red and yellow brick a contrast of colour, as I half feared at the time, only too pronounced, is now coloured with monotonous dirtiness in such a manner that no distinct colour is visible. Unless, therefore, our urban atmosphere can be purified, external polychromy is scarcely a matter within the practical sphere of English town architecture, when employing the ordinary materials of construction. Polished surfaces, capable of being easily cleansed, might, as I have said, have a claim for consideration; but they will always be costly, and therefore only available in exceptional cases.

Internal polychromy to be freely used.

If, however, we must perforce admit this conclusion, we may all the more readily welcome the aid of colour in the interior of our buildings. The general taste of mankind has settled the acceptance of such a direction in principle. No one wishes his rooms to be devoid of colour, or would sacrifice the hues which carpets, curtains, and paperhangings give, to any theory of the classicality of monotones. If the Greek and Roman architects considered their interior architecture imperfect until it glowed with colour, we certainly cannot afford to be more exclusively architectural; and if the best Mediæval churches were intended to have their architectural forms enhanced by a similar means, we need not fear to follow the example thus set. The problem is unquestionably difficult, and success in solving it harmoniously very rare; but its solution is one of the most important duties which the architect should make his own.

I may speak in the next Lecture of some of the obstacles he may find in his path; but success is never glorious except when obtained by sacrifice. In the meantime, I earnestly plead with those who have the direction of public works to be satisfied with nothing short of the best art of the time. Public patronage is essential for the encouragement of high art. Neither painters, sculptors, nor architects can do their best, unless properly supported. Men cannot paint great pictures for which no purchaser can be found, nor can either sculptors or architects develop their best energies, when employed on a limited scale by private clients. Last year I was glad to notice a step taken in the right direction by the authorities of St. Paul's Cathedral, by summoning to their aid two distinguished painters, members of the Royal Academy; and architects will await with interest the result of their labours. At South Kensington Museum artists are engaged in important mural works, displaying in their progress much the same spirit of self-sacrifice which has distinguished their predecessors. At Manchester, also, I believe the Corporation has risen to the occasion, afforded by the erection of their new Town-hall. Here, in London, our public authorities seem more apathetic. We have speeches at banquets on the importance of art; but to what results do they lead? We have municipal bodies with ancient traditions and great wealth. A tardily manifested zeal, begotten of commercial depression, displays itself fitfully on the subject of technical education. Can nothing be done in the meantime to give that encouragement to art which can only be adequately afforded by public action? May it not be asked that some fraction of Imperial and municipal budgets may be devoted to purposes which may elevate the taste of the people, and so be advantageous, even from a commercial point of view, in strengthening the position of our country to face the competition of the world? These and other similar reflections press upon us in considering the alliance of colour with architecture.

Want of patronage of high art in this direction.

We find the experience of the past pointing out to us in this matter the proper road to be followed; and wherever architects have the power to make their influence felt, it should be exercised in favour of the association of the fine

arts. It is the special privilege of Architecture to assert a primacy which allows to her the position of a representative. Her work must not depend on painting and sculpture, for she cannot always command their services. On the other hand, architecture will never be exhibited in its most perfect form without such aid. By it the value of architecture will not be created, but it will be very greatly enhanced, and that perfection will be reached, in which we feel that everything is lovely, everything in its right place, and that no detail, whether of form or colour, can be subtracted without an injury to the whole composition as a work of art.

LECTURE VIII.

ARCHITECTURAL STUDY AND PRACTICE.

(I.) The application of principles to practice.

LEAVING now the discussion of general principles, we will pass from the examination of architecture in theory to that of architecture in practice. If history can teach us much, yet it will not teach us everything. One generation, indeed, resembles another, but it is as youth resembles childhood, and age follows without reproducing youth. The work that Architecture has to do in a complicated system of high modern civilisation must differ widely from that discharged by her in the earlier and simpler days of the world's history. We study the past to obtain a guide for the future; we seek to read in her open pages some clue to guide us in our daily round of duties under the intricate conditions of modern life.

Function of criticism and qualifications for it.

These conditions present, as we know, many difficulties to all lovers of art, and perhaps somewhat specially to architecture. They who have long encountered such difficulties may perhaps be excused, if at times a sense of heaviness and labour lost tends to induce despondency; but youth is a season of hope and boldness, and the young architect, with the experience of the world to guide him, has no right to doubt of success, if he be resolved to achieve it. Practice in his art will give him skill. Precepts and lectures never yet made an architect, but they may still have a certain value; and, if they tend to smooth the way of the rising generation, in however slight a degree, they will not be given in vain. If, however, we are to look for any practical results, it seems necessary that such teaching should proceed from those who in their own work have had the opportunity of becoming acquainted with the problems discussed, and the difficulties involved in their satisfactory solution. In a

volume of excellent lectures on art lately published, the writer of them (himself a distinguished artist) seems to throw some doubt upon such a theory. Saying, truly enough, that it is easier to write about art than to practise it, he draws the conclusion, which these premisses do not logically support, that the less he writes and the more he paints in future, the better it will be for his art and those interested in it. If we were disposed at the outset to accept such a decision, a perusal of the published lectures would go far to render acquiescence in it impossible; but can it in any case be safely concluded that the right appreciation of art by the public is so unimportant a thing, that it can be left without disadvantage to those, who are not practically acquainted with it, to enforce its principles and criticise its efforts? We have had, it is true, a declaration, from no mean authority, that critics may be described as those 'who have failed in literature and in art.' Without discussing the absolute truth of any such definition, it may surely be expected that works of genius, either in literature or art, will be most truly appreciated by those who have had some share of success in such matters. Knowing as they do the perils which wait upon achievement, such critics will, at any rate, be able to allow for shortcomings which to the confidence of ignorance appear inexplicable. I remember an eminent artist, now no longer with us, standing before a work of his own, in the Academy Exhibition, which had been severely handled by certain critics, and saying, 'How little these men know of the difficulty of painting a good picture.' If it be so with the art of painting, the case is still stronger with that of architecture; for, in addition to the difficulties inherent in his art, the architect has to encounter others from which the painter is free—such as incompatible demands on space, time, and purse, with other perplexities which come under the comprehensive title of 'practical difficulties.' Although, therefore, it may be easier, as has been said, to write about art than to practise it, it by no means follows that such writing should be given up to those who are not practitioners, and that such a surrender would tend in any way to the advantage of art.

With regard to architecture, another theory not alto-

gether different from the above has been broached. According to this theory, the modern architect is the cause of everything that is wrong in architecture, and is therefore to be improved out of existence as a first step to the improvement of our buildings. Misreading the causes of success in past times, this class of critics have developed from their inner consciousness a 'master workman,' who is to unite all the qualifications necessary to produce good architecture. Now there can be no doubt that in Mediæval times the masters of the trades or guilds were, to a great extent, designers as well as artificers, so that a master builder was then a very different person from the builder of our own day, who, as a rule, provides the capital required to hire others' labour, and does not necessarily work with his own hands. But we have no reason to believe that even in those days the master builder worked without higher guidance. The rules and traditions of the Freemasons and the direction of the clergy, then the great patrons of building, prescribed a set method and design, so that we can now discover the prevalence of a regular system of arrangement as well as detail. It is idle, however, to suppose that amongst ourselves the master builder or master workman will displace the architect with any advantage to art. The division of labour in modern times forbids any such supposition; and we may be sure that architects will continue to make designs and direct the execution of buildings, which will be carried out by builders or contractors.

The proposal to revert to the 'master-builder.'

(II.) Having regard, therefore, to this certainty, and recognising the difference between the ancient and the modern system of designing, we have to consider what should be the course of study of the young architect to fit him for his duties. It has been said that he needs but two things, taste and knowledge; but in those two things how much is included! I will assume, for the moment, that he possesses the first requisite. If he has it not, he has mistaken his profession, and lacks that which no teaching will supply. With regard to knowledge, he has even better means of acquiring it than have been enjoyed by any previous age. It is, of course, impossible that a good architect should have too wide and deep a culture, and the requisites specified by

(II.) The studies of the young architect.

Vitruvius will make the best of us feel ashamed of our shortcomings.

Antiquity. If, however, we pass by such wholesale catalogues of acquirements as impossible to be insisted upon in a single person, we shall find that it is principally the duty of an architect to study Antiquity, History, and Climate. A knowledge of what has been done is the best guide to the conviction of what may be done, and a true originality will better issue from experience than from ignorance. In these days of easy travelling, architects can readily become acquainted with the works of antiquity, and have therefore little excuse for want of knowledge. In the times of the master workman, he knew but one style, and that the style of his country, or even of his district. Some have found in this circumstance an explanation of the success of architecture in the Middle Ages, and would have us blind our eyes and limit our appreciation, in order that, by following a similar course, we may arrive at like results. This, however, is impossible. We have the experience of the past laid out before us as in a volume, and cannot choose but read. Whatever may be the difficulties of modern problems in architecture, it cannot be best that we should face them with self-sought ignorance, or declare lack of knowledge an advantage. A study of ancient buildings is, therefore, one of the first requisites in the education of the architect. Such a study cannot, in my judgment, be commenced too soon in his career, as regards buildings at home and therefore easily accessible. An acquaintance with other ancient masterpieces can be acquired from books, to be extended hereafter by foreign travel. Actual measurement and drawing to scale are to be preferred to pretty sketches of effects; for at this stage of his education the architect is storing facts in his mind, and nothing impresses them on the memory like drawing from dimensions taken on the spot. Photographs are valuable as mementoes of the general appearance of a building; but they constitute a trap for the inexperienced observer, as they too often lead him to be satisfied with them without working out the subject for himself, and he thus loses the wholesome discipline of hand and mind, which drawing from careful measurement will

give. Experience in drawing the human figure is likewise most valuable, and should be acquired at this time, before the habits of technical drawing are too confirmed. Such a power will be most useful to the architect, when he has to design the application of sculpture to his buildings. He will not, of course, supersede the sculptor; but he will better co-operate with him, and enhance the effect of his own designs, if he shall have gained some facility for figure-drawing and the power of explaining his views. As discipline, moreover, of hand and eye, nothing can be better than illustrating the habit of drawing that most difficult of objects, the human figure.

History.

From the study of antiquity, the study of history will almost necessarily follow. The consideration of the forms of ancient architecture leads naturally to inquiry as to their origin, the causes of their existence, and the customs of the people that adopted them. No one can enter into a critical consideration of the Parthenon without some knowledge of classical religion and habits of thought; nor can we judge rightly of the Renaissance without some acquaintance with the causes of that remarkable outburst of freedom and protest against the Mediæval spirit. That spirit, again, has written its own history, and we may study in its records the peculiarities of time and place. Thus, in France, the flourishing condition of the Church is evidenced by her magnificent cathedrals; the town-halls of Belgium tell us of prosperous trade, and of the growth of a powerful middle class; while in Germany, the castles perched on hill and crag, frowning over plains and dominating the watery highways, such as the Rhine, denote the prevalence of civil discord, each prince or noble seeking to rule the others by the right of the strongest, and all agreeing to oppress the mass of their countrymen. In England our ancient buildings speak, too, of national character if not of history. Aiming at more moderate results than their neighbours, English architects realised their conceptions more completely, and left less of their work unfinished. If France be the land of cathedrals, England is the country of parish churches, built in styles admirably chosen for the purpose in view, and executed with gravity, moderation, and finish. National peculiarities can be best appre-

ciated through history, and architecture, when studied in connection with the latter, gains a new interest and charm.

Climate.

Acquaintance with the works of architecture in lands differing from our own, causes us, moreover, to recognise the controlling influence of climate on architectural forms. An architecture of which the dominant idea is that of giving shade and shelter from the rays of the sun is obviously out of place, where light and air are the first requisites. These things are now so generally accepted that one is almost ashamed to repeat a truism; but it is not very long ago that a close imitation of Greek or Roman forms was considered a necessity of good architecture, and even now we often see foreign details imported, which, however fitting and good under different conditions, suit neither the wants nor the climate of modern Englishmen. Yet we may well study and borrow from others any obviously better methods than our own for dealing with similar conditions. Take, for example, the covered entrance or *porte cochère* of Parisian houses. In a climate like our own such a feature is at once so sensible, and would be so architecturally effective in our not too lovely streets, that the marvel is it should not have been introduced into any of the new blocks of houses lately built in London on great properties like the Grosvenor estate. It is strange that with our experience of winter cold and damp and fog, the entrances to our houses should be arranged in such a manner as to involve the maximum of exposure to these dangers to invalids and others; so that a piece of matting to unroll between the door and the carriage is thought a necessary piece of furniture of a gentleman's house, while in Paris ladies in full dress can proceed in comfort to social gatherings without fear of harm to themselves or their garments, both starting and arriving under cover. In Indian, Egyptian, Italian, and indeed all architecture, the influence of climate may be seen, as in the open patio of the Spaniards, the court of the Moors, and the atrium of the Romans. Some of these features are so pleasing that we may often wish to adopt them in our own buildings; and there is no reason why we should not do so, if the difference of climate be duly provided against, as, for instance, by covering the atrium of the Romans, and turning it into a hall,

as has been done at the Reform Club, in Pall Mall, of which building it forms the most important portion.

All these branches of study of antiquity, history, and climate may be pursued at home by the architectural student at the outset of his career, though in respect of the last, perhaps, a full appreciation can scarcely be secured without the practical experience to be obtained from foreign travel. He may, however, acquire from books and other teaching a knowledge of facts, which will constitute, as it were, the grammar of his art. He can at the same time be gaining practical experience in the office of architects already engaged in actual work. If proper use be made by him of these means of knowledge, he will be training himself to make the most of future opportunities, and fitting himself for eventual responsibility. He will also discover, before it be too late, whether he has chosen his profession wisely, and whether he possesses the determination requisite to triumph over the difficulties which encounter beginners in the shape of hard work, often assuming the character of drudgery at uninteresting things. Regularity, order, and exactitude are, he will find, necessary conditions of success in the work of the modern architect. Supplementing his office work, the student should neglect no opportunity of training his eye and hand by sketching out of doors and figure drawing, while, by reading works on construction, and examining buildings in progress, together with their prosaic working drawings, he will gradually acquire a knowledge of the scientific side of his profession, which will be necessary to enable him to embody in actual form his artistic inspirations. Study at home.

It is at this stage that English and foreign travel is, I think, most productive of good to the learner. Youth is naturally dogmatic. Rejoicing in strength and the dawning of power, strong in the faith to remove mountains, to it the future seems all bright, and success certain. The sight of the great achievements of olden days will be to such spirits a restraining lesson, a sobering reminder that great men have already played a glorious part, and that their own most painful exertions will not be too much to obtain that success which, to early dreams, has appeared so easy. Merely to visit architectural masterpieces as a sightseer will not, how- Foreign travel.

ever, be enough. Nothing impresses a design upon the mind like drawing it, and if a moulding be admired, it should be carefully measured and accurately drawn, when the actual proportion of its parts will often surprise those who have judged of it from its effect of light and shade in its place.

Since the Gothic Revival, the habit of measuring and drawing Greek and Roman architecture has been too much neglected, and a consequent want of familiarity with classical detail is often seen in modern buildings. The student will do well, however, not to neglect any opportunities of adding to his stock of knowledge, and will remember to advantage that, though fashions change, true principles of art, like those of the Greeks, remain ever the same. In the details of their works he will find matter well deserving of his study, and both Roman and Renaissance works contain much to extend his knowledge and inform his taste. Whatever may be the local result of any battle of the styles, designs based on classical traditions will hardly disappear from the practice of the modern world. In travelling, the student should, of course, bear in mind that he is still undergoing instruction, and that his time should be devoted to work. How far he may be able to push his researches must necessarily depend upon circumstances, but he should endeavour, at any rate, to see, if possible, Greece, Italy, and France.

(III.) The start in life.

(III.) Returning home, the time has now arrived when he will be eager to turn his knowledge to account, and show, in actual work, what he has the power to do. It is proverbially difficult for beginners to make a start in professional life. The youth just about to be ordained does not at once become famous in the Church, but seeks a title to orders in some quiet curacy. He expects to work his way from subordinate positions to those of dignity and responsibility. It is the same with the lawyer and the doctor. The barrister newly called has to watch and wait, until his talents become known and lead him onwards to success. His rewards bear a proportion to his professional experience, so that no uniformity of remuneration can be thought of. The medical man, again, has a steep ascent to climb, before the student from the hospital becomes the trusted adviser of society. The young architect, therefore, would have no right to complain if he,

like his fellows, had to work hard and bide his time for attracting public recognition. He is, however, more fortunate than they are at the outset of his career, whatever may be the case afterwards. In no profession is there so great readiness, on the part of the public, to entrust responsible duties to inexperienced hands—a circumstance which may doubtless explain some peculiarities of modern architecture.

The competitive system and architectural competition.

In the present day the most obvious road to practice for the young architect is by the system of competition. If he have used his time well, and have acquired the power of placing his designs on paper in an attractive manner, he is not likely long to want success. How far architectural competition, as now pursued, is a public advantage, is a different and more complicated question. We live in an age which has elevated competition into almost a religion, and has applied it very extensively to public life. Clerks, soldiers, and sailors have all to pass the portals of an examination. The information required from a youth is in many cases of such a nature as to perplex those who might be supposed to be vastly his superiors in learning. The late Lord Derby, in writing to congratulate the Queen on the distinction with which the Duke of Edinburgh, when a boy, had passed a naval examination, pleasantly expressed his satisfaction that the system had not yet been applied to Ministers of the Crown, as the difficulties of forming a cabinet would, he was sure, be thereby materially increased, to the detriment of the public service. In considering the question of architectural competition, however, in connection with the general adoption of examinations as a means of entering public life, it must be remembered that those intended for the latter now to a great extent pass examinations, so regulated as to ascertain with some degree of certainty that the candidate possesses the minimum of acquirements, which the duties of his office appear, in the judgment of his superiors, to require. In architectural competitions, the object is to select a man to whom shall be entrusted a work requiring knowledge, taste, skill, and high moral qualities.

Open competition and its drawbacks.

The captivating theory of such trials is, 'Let all do their best, and let the best win.' Who, it may be asked, however, will be the 'all' in such cases? Setting aside exceptional

instances, it will be the young and inexperienced who will throng the lists, and spend their time, which has not yet acquired any great pecuniary value, in anxious endeavours to captivate their judges. And who is it, again, that judges of their efforts, and awards success and failure? Let the best win by all means; but how is the best to be ascertained? To judge of architecture is no easy thing. To make a pretty drawing may not be very difficult, but to translate it into actual form demands a higher art, and many a showy design selected in competition has turned out in execution a poor and commonplace affair. An experienced architect, who thoroughly understood the question, would often send in a design, which, though it would prove satisfactory in execution, must inevitably fail to recommend itself to the highly wrought expectations of those who are to be the judges of the competition. He, therefore, either holds aloof from the trial altogether, or he is tempted to wound his self-respect by sending a design which he does not approve, but which is likely to please the taste of those who will determine the matter. In competitive examination generally the examiners stand on a platform of superiority, due to their age, experience, and knowledge of the subjects of the examination. A young man is not humiliated, if the result teaches him that old heads are not to be found on young shoulders. A certificate of proficiency or of distinction has, therefore, a real and definite value. In architectural competitions, however, the state of affairs is different. In some cases professional advisers are called in, and their advice is listened to; but in many competitions, even of first-rate importance, this is not done, and decisions are often arrived at which command no respect, even if they do not give rise to complaints of unfairness. It is not surprising, therefore, that architects of experience manifest an increasing distrust of competitions, and in order to overcome such distrust a system of limited competition has been tried.

Limited competition.

In these cases a small number of architects are selected and invited to compete. A moderate honorarium is given to each competitor, although in some cases nothing is given except a promise to employ the successful competitor. Not long ago, a committee desiring to erect a club-house invited no

less than twelve architects to submit designs on the last-named principle. They succeeded, I believe, in thus obtaining a dozen designs at the price of one, though, in consequence of various refusals, not from the architects of their original selection. Proposals of this kind appear to ignore the fact that the design of an architect has any value, or costs its author anything. The expensive education, and the time that must elapse before a living can be made in the profession, are not considered; and it seems to be believed that architects will always be ready for a scramble, and eager players in a lottery when the odds are eleven to one against them. The effect of such a conviction on the general welfare of architecture, and of the whole profession, constitutes a heavy drawback on the advantages afforded by competition to the young architect in first making his professional start. A case came lately within my own experience, in which, after several architects of note had declined competition, the work fell in consequence into the hands of a clever designer on paper, who proved so practically incompetent that his work was in danger of falling within a few months of its completion, and has required to be patched and otherwise dealt with in a costly and unsatisfactory manner. It was, doubtless, to avoid such risks as these that the system of competition restricted by previous selection came into use, and has been adopted by the Government; and if it were possible to guarantee that it would be carried out in good faith, the system might have much to recommend it when applied to cases of first-class importance.

Breaches of conditions not unfrequent.

Unfortunately, it would appear from experience that this is impossible. People ask architects for designs which involve great sacrifices of time, trouble, and cost, without apparently any conviction that by so doing they undertake also to be scrupulously upright, on their own part, in observing the terms on the faith of which they ask and obtain such sacrifices. As any payment made is small, and given as an honorarium only, all the competitors but one work without remuneration, a circumstance which should entitle them to the most strictly just treatment. No one would think of inviting the Attorney-General, with eleven other leaders of the bar, to work out a difficult case, on the promise that to one

of them the professional conduct of it should be ultimately entrusted, nor would any one expect to obtain the opinions and advice of twelve eminent physicians, in order that he might choose one of them. If, therefore, architects are expected to do that which no other profession would tolerate, they have certainly a very strong right to demand that when they have devoted themselves, perhaps for months, to a work, and have made and delivered designs, thus trusting others with implicit confidence, they should be treated in return in accordance with the highest principles of justice and equity. Those who have most acquaintance with competitions, as now arranged, can say how far such a description would as a rule apply to them. In dealing with architectural designs, it seems too often the case that those who have obtained them recognise but slightly the obligations which in other cases would be readily admitted. While the law sanctions and enforces the strict terms of a commercial contract, agreements made with architects to obtain their services in competition are too often treated as binding one side only, and conditions of competitions, even when to all appearances guaranteed by names which should command respect, are violated both in spirit and in letter. Such are some of the dangers of competition, and few can say that they do not seriously impair any gains from the system. Good faith is obviously a condition absolutely necessary, if it is to continue to prevail.

Value of competition to a young architect.

As long, however, as the system of competition prevails, it opens a means of advancement of which I advise the young architect to take advantage. After such training as I have described, he will return from his travels with his mind well stored with ideas, and his sketch-books full of sketches. His time being as yet his own, he will make no great sacrifice by devoting a share of it to unremunerative work. It will be good practice for him to bring his conceptions into a practical shape, and apply his taste to designs of palaces, town-halls, cathedrals, law-courts, or other buildings for which designs are sought in competition. The young architect in such cases loses little or nothing if he fails, while, should he succeed, he obtains at once an opportunity of acquiring the experience which he lacks to give full value to his labours. He will gain it the more readily from finding himself en-

trusted with grave responsibilities of life and limb, and with the control of expenditure usually measured by thousands, at a time of life and professional standing at which his friends in other vocations are generally still in training. Competition is, therefore, clearly an advantage to the architectural student anxious to get rapidly into practice. Opinions will, however, differ as to the degree in which the system conduces to the public interest, or in the long-run benefits the art and the profession.

Protest against erection of public buildings without architects.

An architect, like any other man, desires success and hopes for fame. It is to the interest of the public to avail themselves of his ambition, and secure his efforts for public services. He must live by his art, and will usually depend on private patronage for the satisfaction of his requirements under this head. For fame and distinction he must look to public works, which all can see and appreciate. Wren is known as the architect of St. Paul's Cathedral to thousands, who are unaware of his numerous other works, some of which are possibly more highly esteemed in professional opinion. The charge of the public works of a country must always be an object of legitimate ambition to its citizens, and society has, therefore, a right to expect the benefits likely to result from such a condition of things. It is, therefore, a matter of regret on public grounds that any tendency should exist to treat architecture as a merchandise, to be supplied by contract by public bodies or Government Departments. When the great London Post-office was built, the design was entrusted to Sir R. Smirke, who well performed his commission, though of course neither he nor any one else could then foresee the immense development of postal business which was soon to follow, and to demand proportionately increased accommodation. We have lately seen a new post-office erected opposite to the old one, and apparently even larger than its predecessor. For the erection of this building it was a matter of almost official boasting, as a matter of economy, that no architect was employed, and that it was to be designed and carried out by the clerks of a department. This system has been since adopted in other cases, and so extended, that it would seem to be intended to make the employment of architects on Government works the exception,

instead of the rule, as heretofore. If at the same time the system of competition should be so worked as to entrust other public works to inexperienced hands, the most important of the legitimate roads to distinction will in the one case be closed to the profession altogether, and in the other the public will fail to receive adequate guarantees of efficiency.

Doubtful value of competition as a general rule.

With reference to the influence of competition on art, we must remember that the value of an artist's work must be measured by its sincerity. It must aim not at merely pleasing the first hasty judgment of persons perhaps insufficiently instructed, but at the satisfactory solution of grave problems in such a manner as to be worthy of the lasting approbation of posterity. The qualities which are most likely to command success in competitions are often in sharp contrast with those which are necessary for the attainment of the latter object; and some architects of eminence have in consequence consistently declined to enter a competition on any terms. The temptation to promise impossibilities, to hide difficulties, and to make things pleasant all round, proves often too great for any but the most robust artistic virtue. Few persons of real taste and knowledge of architecture would choose competition as the most satisfactory method of obtaining a good architectural design for a private work, and it has yet to be explained why the public ought to be more easily satisfied.

The influence exerted on the profession by competition cannot but be serious. It will doubtless always exist in the case of works of minor importance, and it is, I think, very desirable it should do so to provide suitable opportunities for young men of talent to show what they can do. If it be the interest of the public that there should be good architects, there can be no question of clashing with the interests of the profession, with which, rightly understood, the public interest is identical. Anything which deteriorates the character of a profession is a public loss. Competition by smoothing the path of the beginner may perhaps involve danger in the end. It is in no case desirable to tempt men to adopt a calling for which they have no special fitness, until a calling becomes crowded in excess of the demand, and bitter disappointment succeeds the dazzling hopes raised by unduly early success. A time comes, moreover, when men

may point to what they have done as an evidence of what they can do, and may fairly expect to reap the success they have earned without being exposed to the fierce blasts of competition which they were ready to encounter in their youth. If by a general adoption of competition abstention from public life is forced on such persons, a profession thus shorn of its fair rewards for those who have climbed its heights may easily become lowered in tone, and cease to attract to its ranks those who are best qualified to fill them.[1]

The system of architectural competition is thus, we may see, many-sided; and while I advise students, under present circumstances, to avail themselves of it, I have been anxious that my advice should not be misunderstood in reference to the many important questions raised by competition in the interests of art, the public, and the architectural profession.

(IV.) Conclusion. Practical duties of an architect.

(IV.) It now only remains for me to say a few words in conclusion on the practical duties of the architect. I have supposed that he has worked hard and done his best to acquire a knowledge of his art in both its artistic and scientific branches. I further take for granted that he has a real love of architecture and liking for his profession, without which his calling will degenerate into a mere commercial business. If he be without artistic feeling, no amount of study or external teaching will make him a great architect. Assuming, however, the existence of such a feeling, a few words of practical advice may not unfittingly close these Lectures.

Earnest work.

Having pointed out the chances offered by competition to the young architect, it is necessary to add that, if he will profit by the opportunities given by it, he must be careful to justify his selection by perseverance and earnest work. He must remember that the work of life is a serious thing, and that he has now entered upon his responsibilities. Whatever his ability may be, he must take care that it is put forth in its integrity. 'Whatsoever thy hand findeth to do, do it with all thy might.'

While bringing to all his work the refining influence of

[1] The readers of the foregoing Memoir will have little difficulty in accounting for this special and emphatic reference to the drawbacks and grievances of architectural competition.

Practical science.

beauty of art, the architect must also justify himself by the canons of utility and economy. It ought not to be possible to say that builders' houses, if more ugly, are more comfortable than those on which architects have been engaged. Questions of warming, ventilation, and lighting should not be regarded by an architect as beneath his notice, because he claims the title of artist. He must, undoubtedly, be an artist first and a man of science afterwards. He can never acquire the first character if it be not inborn, while he need never want for scientific teachers, if he will only recognise the importance of the subject, and qualify himself to reject the evil and choose the good. He must not expect, however, to bend the real wants of his time in accordance with his own arbitrary views of taste; but must remember that, as a modern architect, he has to work in accordance with the conditions of modern life.

True economy.

With reference to economy he must regard it in its widest sense. In the historic masterpieces of the past it was not the economy which is meant when pounds, shillings, and pence are alone considered, that ruled the designers. Mere cheapness of first cost proves often enough a very expensive delusion; but there should always be seen in the work of the architect economy of resources, economy of truthful simplicity, economy of plan. Few persons outside the profession, and perhaps not all who are within it, recognise the vast importance of the last consideration, and I cannot advise the student too strongly to give the utmost attention to his plans. In so doing he will not only be promoting economy, but will secure opportunities for the display of his taste by well-contrived internal effects. With reference to the pecuniary meaning of economy, the young architect must be on his guard. He will be surrounded by those who will press upon his notice materials and methods of construction, which have no merit if they are not cheap. Plaster to look like stone, deal to resemble oak, stone to vie with marble, will be passed before his confused vision, till he may be tempted to think with a veteran author still amongst us, that he is living in a world where 'everything is anything but what it seems.' He will be wise to avoid hasty conclusions in such matters; and if he regard himself as acting

like a trustee for his employer whose money he is expending, he will not be too readily led along the path of innovation. Good building can never be what is miscalled cheap building, and an architect should never attempt to compete with the speculative builders. We constantly hear complaints from those who live in badly built houses; although it may be doubted if many of the complainants would be willing to pay the increased rents which a better system of building would involve. It is common enough in such cases to blame architects for a state of things with which they have nothing to do, and against which their practice is, or should be, a standing protest. The better built and finished houses of the last century were erected with cheaper labour and materials than can now be obtained, and the architect must explain to those who consult him that solid walls, rigid floors, good drainage, and efficient sanitary arrangements are worth paying for.

Professional honour.

He should further satisfy his employer that he makes the latter's interest his own, and in this way will often lay the foundations of friendship which will outlast the circumstances from which it has first arisen. It need hardly be said that to justify such confidence as an architect receives, high character and honour are absolutely essential. An architect's office is, of necessity, one of trust, and I am proud to believe that the instances are few in which confidence has been shown to be misplaced. Let each man on entering the profession regard himself as a depositary of its honour, and determine that in his hands it shall lose no lustre. Let him set an example of earnest work, and consider it a matter of conscience to do his very best in whatever is committed to him.

Acting on such principles, and with the history and art-treasures of the world to inform the intellect and to improve the taste, the architect of to-day will be prepared to battle strenuously with the difficult problems of the high civilisation of modern life; and though his ways may differ from those of olden days, he will find success by reconciling the ever-advancing science of his day with the principles of art, which, as far as they are founded on truth, are as immutable as truth itself.

LECTURE IX.[1]

POSITION OF MODERN ARCHITECTS IN RESPECT OF ARCHITECTURAL RESTORATION.

Position of the modern architect towards restoration.

In the present Lecture I propose that we should consider the general question of the duty of modern architects, in face of the peculiar circumstances of our own time, and particularly with reference to the difficult question of the Restoration of Ancient Buildings.

It must be evident, at the outset of our preliminary inquiry, that the architect of to-day has difficulties to contend with which are peculiar to himself; and that, if he be in some cases more free than his predecessors, he is in others far more trammelled by the exigencies of fashion and science, and by the many vacillations of public taste.

The influence of ancient art exemplified in the Italian Renaissance.

We shall see, for example, in treating of the Italian Renaissance, that the great artists of Italy could not avoid being influenced by the knowledge they possessed of ancient architecture, the ruins and relics of which they saw everywhere around them. These were a book to them, though sealed in a casket and written in a dead language, until the enthusiasm for classical literature, kindled by their poets, pierced through the accumulated crust of ages, and, by furnishing the key to the casket, set free its contents, while leaving, we trust, both for them and for us, hope at the bottom. The Italian love for ancient art was never dead. Here and there some indications of Renaissance were always appearing, and the opposing principles of the arcuated Gothic style were never heartily welcomed, or completely adopted. The architects of the day could not, therefore, shut their eyes to all that had been done before, and they could not, and did not, work in the single-minded manner

[1] Delivered January 31, 1878.

which was only possible to those who, like the Northern Mediæval builders, knew but one style.

The position of the Italians, particularly after the Renaissance, was, therefore, in some respects, not unlike our own. Having knowledge, they had incurred the responsibility of choice; and with various forms of art before them, they, like ourselves, were at liberty to use their freedom by selection.

Modifications of Roman principles led to the round arches of the Romanesque and Norman schools; soon to be followed by the Lombard varieties of Italian Gothic. Eclecticism was enthroned in Venice, when the East was ransacked for marble columns and mosaics, and the horses of Lysippus were utilised as architectural adornments of a front, totally unlike any other structure in the world, and delighting us with its strange romantic beauty, in defiance of all rules of regular architecture. We seek in vain in Italy for anything like the rigidity of custom which obtained amongst ourselves.

Italian political divisions, again, led to divergence in art, in spite of the welding influences of a common faith. Thus, at Florence, we find a type of building suggestive of fortified grandeur; at Genoa, of mercantile prosperity; at the Eternal City, of an ecclesiastical pomp, which claimed to rule the world. In all cases, the temper of the times, and local taste, determined the character of the architecture, whether domestic or ecclesiastical; and thus led to a variety, in strong contrast to the uniformity of Northern Gothic art.

Similarity of our own case.

It is impossible not to recognise in the circumstances above described, a similarity to those under which a modern architect is called to apply his art. He, too, has now the history of ancient art laid bare before him, and this to a much greater extent than at any former time; he also is bound to consider local requirements, and the peculiarities of taste arising therefrom; and he has, moreover, scientific and sanitary problems to solve, which were never dreamt of by his predecessors. If we add to this description the class of economic restrictions to which he is subject, it will be apparent that although he shares the freedom of choice possessed by the old Italian architects, he is even more limited and controlled by exigencies outside his art.

Historical continuity of architecture in general.

The modern architect, again, is implored by opposing schools to proceed in opposite directions. If he listen to the one, he must ignore the past, and set up for originality; if he consent to the guidance of the other, he must be satisfied with imitation of the works of bygone ages. All true artists are indeed original, in a certain sense; but a new and original style of architecture has never yet been invented. We can read the history of our art backwards, until all traces of origin are lost in the mists of a dim antiquity, passing through Rome and Greece to Etruria and Asia Minor, and thence to the almost mythical annals of Egypt and Assyria. In such investigations, the origin of forms which became gradually developed and dominant, may be traced in the works of different tribes and races, leading up to, and culminating in, the perfection which is only to be achieved by persistent effort.

Historical continuity of English architecture.

Architecture is thus surrounded with associations; it is a history, as well as an art. If it has been so in Italy, the case is not different in England. Here, we have had also a regular succession of recognised architectural forms. We do not, it is true, recognise the intrusion of the opposing influence of rival styles (except perhaps at first), but we find here also a development of design, which is in a high degree historical. The Saxon gave way to the Norman, in art as in politics, and the latter initiated a movement to be carried onwards through centuries. This movement gave us that which we term the Early English, the Decorated. the Perpendicular, and the Tudor; and lost itself at length in the Elizabethan and Renaissance of the Stuarts. Our ancient buildings reflect these changes. In them we find evidences of them all. Few are uniform in style. Norman towers, pointed arches, lancet windows, and perpendicular tracery are frequently found in the same edifice. Differences of ecclesiastical rule, as of the great monastic orders, have left their mark on the plans of abbeys and cathedrals, so that those who run may read a very history in stone.

How is the modern architect to deal with this history—this record of olden days? If it be his duty to hand down to posterity that which he has received, he must at least see that it sustains no injury in his hands. Maintenance, at

any rate, is necessary; and between maintenance and restoration the boundary is narrow.

Conflict of schools on restoration.

(II.) If an architect appeals to society for guidance, he is confronted at once by two, if not more, parties, each of which is full of confidence. He is at once brought into contact with the materialists of the present, and with the archæologists as worshippers of the past. The question becomes rapidly one of sentiment, rather than of architecture. Do not suppose that I say this in any spirit of disrespect. The day has never been—it will never arrive—when men can disregard the instincts of the human mind, and reduce all actions to a calculated system of dry reasoning—a rule-of-three of hard facts, ignoring the qualities which have made men happy, and nations great. Architecture must ever be associated with what we may rightly call sentiment, and the question of the restoration of ancient buildings is one which cannot be treated in a purely technical sense.

Let us inquire, therefore, what our various advisers would have us to do.

(*a*) The worshippers of the present and the future.

And, first, as to the materialists of the present. What say they? To-day is their day. Philosophy lends to them an epicurean disregard of aught they cannot touch, handle, and enjoy. Science says to them, Why look back? You are the lords of the heritage, the salt of the earth. The present is your own; it will not last: make use of it quickly. Do your best with it; seize its advantages; let the future look to itself. You cannot resuscitate the past; you ought not, if you could. Forget it as soon as possible. Talk not of ancient buildings and historic monuments. They have had their day; it is now over; let them not cumber the ground, and encroach on the rights of the living. The philosopher, the man of science, the nicely calculating constructor, the utilitarian engineer—these are the men of the day, the magicians who wield the lever that can move the world. The inventors of railways and steam-engines, of gas, electric telegraphs and telephones, have nothing to do with mouldering ruins, and with 'musty parchments.' The present alone is ours: the past is gone; the future is all dark: 'Let us eat and drink, for to-morrow we die.'

From the disciples of this school we cannot expect aid

in our veneration for antiquity, nor is the case much more promising with those who, while disdaining the worship of the present, fix their eyes mainly on the future. To them, too, the past is dead. Its lessons are out of date, its maxims are antiquated. It cannot be mended; what has been, has been. It has had its day. Life is too short, they say, for looking back; even the present is fading away as we gaze upon it. Let us fix our eyes on the future; let us shape that, if we can. Each may do something, even in his own little sphere. If we cannot mend the past, and cannot retain the present, clearly the future is the true sphere of those who would promote the wisdom and happiness of the world.

The latter class of thinkers agrees with the first, in refusing reverence to the past. The dead, they both say, cannot teach; vigour and life belong to the living; the past is left to bookworms and antiquaries. The aims of to-day are so urgent and all-absorbing, that there is no place left for the relics and remains of olden time. They are already smitten with decay. They must die. Bury them out of sight, and let them give place to truer, because newer, creations.

It is impossible for us, as artists, to accept this reasoning, nor are we left in doubt as to the views of its opponents. I have called the one class materialists of the present; let us now see what the other, the worshippers of the past, can say.

(*b*) The worshippers of the past.

They will tell us that no one can ignore the past, neither the nation nor the individual. If the child be the father of the man, so is the past the precursor of the present, the warning of what shall be in the future. Our great buildings are precious heirlooms, to be neither destroyed nor tampered with. Look to them lovingly, treat them with reverence, sustain them with an affectionate and filial solicitude. Do not too hastily assume that we are wiser, better, happier than our fathers; continue old customs, and forget not, in the toil and bustle of to-day, the grave memories of antiquity. A great country can never really ignore the past; for with the associations of the latter is combined all that speaks to men of public duty and patriotism. 'Eng-

land expects every man to do his duty' was the signal which thrilled every heart at Trafalgar, because it spoke to each man of an historical past, as well as of a present and a future.

And, indeed, we in England can never undervalue the past. We have descendants in all parts of the globe, communities who look up to the parent country, and call it 'home,' in Europe, Asia, Africa, and America. In the latter continent, moreover, we are face to face with a great nation, not always with us, but notwithstanding of us; speaking our language, reading our literature, thinking our thoughts, and for the most part respecting the same things. What is it that these dwellers in new countries say to us in the old? In the abundance of youthful energy they do not always envy us our old laws, our customs, our political institutions; these they believe, it may be, they can improve or surpass. Are we rich, busy, and strong? It is, they think, only a question of time, when they will be richer, busier, stronger. No! there may be respect, and even imitation; but there is no envy of these things. That is reserved for our ancient buildings, our venerable history, our national past. Newness has a taint of always some vulgarity, which cannot touch the institutions, the architecture, the traditions of an old country, bearing on its surface relics of many days, past and gone, and seeming to connect the Middle Ages with the times before and after them, by means of ties as strong as they are imperceptible, which have borne the tension of centuries. These things are to us a priceless heritage, not to be made, discovered, or bought, but to be cherished and appreciated. We cannot afford to lose that which can never be replaced. Our old buildings are in the same category with our national history, and must be as dear to us as the latter.

If we would have our sons perform great deeds in the future, we must see that they respect the past; we must preserve its archives and traditions; and pointing with one hand to the memories of departed heroes, we may extend the other towards the dim horizon, which seems to bound the future, and say to the youthful aspirant, 'Go and do thou likewise.'

It was a great English teacher (Dr. Arnold) who declared the value of antiquity in a seat of education, which should ever be the birthplace of noble aspirations and lofty sentiments. To the men, who glory in the present, and worship an already opening future, it may still be said, Boast not of either, for is not man ever the same? He is no nearer happiness than of old, because he can now telegraph, or travel at immense speed, or because his achievements here are but earnests of coming triumph. His individual strength and health are what they were when the world was young. Science and philosophy help him but little in his struggles and anxieties here. They leave him to fight his daily battle of life as best he may, and it is well, if in the speculative regions of free thought, they do not make the future darker for him than for the simpler trustfulness of his fathers.

(c) The religious restorers.

This brings me to the consideration of a third class of suggestions with which our architects must also deal. These are intimately connected with the sacred uses to which most of our ancient buildings in this country are devoted. The question of restoration has been associated with, if indeed it has not arisen from, a great religious and social change. Revivals of forms and ceremonies have had much to do with architectural restoration of churches; and, from the days of the Cambridge Camden Society, the clergy have been at the head of that notable movement, which has, to a great extent, caused the Gothic revival.

It is not unnatural now that, after so much activity, men should look around, and should begin to ask what has been the result of an age of restoration. One result is unquestionably to be seen in the public interest shown in such matters, and in the vast sums of money subscribed for works of restoration. Men have learnt to love the old structures which they formerly neglected, without a suspicion that their love may prove destructive. Costly buildings and crowded services are seen around us in all directions, and an ever-growing determination is apparent to attract the masses to our churches. If we have occasionally reason to deplore the effects of misguided reforms on the fabrics of our churches, we must, nevertheless, remember that there are human

wants and sympathies to be recognised, to which even archæological zeal must submit to be subordinated.

The plea of spiritual fitness and usefulness.

Our churches are not mere tombs of the dead, but places of worship for the living. While we protect them with jealous care from the spoiler, they must yet be made suitable to their high purpose in the spiritual life of this our day. Full as they are to us of the chastening memories of the past, they must be regarded as something more than libraries of old-world learning, or museums of strange and curious art. They, like ourselves, have their duty to do to the present. To reconcile this duty with affection for the past is not always an easy duty for the architect; but it has to be faced.

If the church of the district be so arranged that reverence in the services be impossible; if the pomps and vanities of earthly grandeur make themselves felt in it; if there be signs of neglect and deadness, all the more conspicuous from the contrast outside its doors, are we seriously to be told that we must not alter all this? And why? Because the gallery which darkens and divides bears the names of some old churchwardens; because the damp and ague-giving pavement exhibits some half-legible inscription; because the great squire's pew, which symbolises selfishness, and shuts out the poor, has perchance some pleasant mouldings, some cornices of Georgian date, or, better still, some reminiscences of Queen Anne.

The untenability of the rigid historical view.

This is to load us with fetters, to press respect for the past too far, with an exaggeration which can only produce reaction. We are told sometimes that we have no right to touch such churches as I have alluded to. Their galleries or pavements, their dank chancels, and dismal recesses, their pews with fireplaces and easy chairs, must not be molested, for they are historical. Historical indeed! but of what? Historical of carelessness and coldness, of disregard for that better past, which all of us must reverence. Historical of a state of society which would reserve even heaven itself for the rich and great, while bidding the poor to worship at a distance and beneath their footstool. Is this a history which we are bound to perpetuate, and are the most sacred cravings of our inmost life to be limited for ever by the mis-

doings of a former generation? If their history is to be jealously preserved, why should the actions of the present age be stifled and unrecorded?

The church restorers of to-day have at least worked with high and definite aims; they have sought to restore to the many the alienations of the few; they have opened churches and multiplied services; they have banished, to a great extent, the distinctions of rank and wealth from the House of God; they have endeavoured, not without success, to reconcile old art with modern use. Is this work so small a matter that it is a thing to be ashamed of? to be named in whispers, and mentioned with deprecation?

If past days of deadness are to have their history, is there to be none of a revival of life and eagerness, of high intentions and lofty aims? If a church has been 'restored and beautified,' a hundred or a hundred and fifty years ago, by the village carpenter, can it be really contended that we must allow his ignorant botching to remain, because it is 'historical'; and, if so, why is his claim on future history to be preferred to that of the better instructed restorer of the nineteenth century?

Our ancient buildings are indeed heirlooms, not to be lightly tampered with, but as most of them happen also to be churches, they must be used by the living, and must suit their requirements. They must be rescued from damp and decay, even if in so doing their picturesqueness be impaired, a picturesqueness not to be regarded if it arise from dirt, or 'matter in the wrong place.' They must be available for the sacred wants of the present time—protected from a gospel of decay and death, which would hand them over to the moles and the bats.

While carefully regarding the claims of the past, our churches must be the well-used heritage of the living, places to which men may withdraw from the turmoil and din of life safe, if it be but for a moment, from the struggles ever going on outside their walls for rank and power and wealth—those things for which mankind will fight, and lie, and steal, and sell their very souls. To the vast number of earnest men, who regard our churches from this point of view, there is something saddening and petty in the exaggerations of mere

archæology, which would hinder all improvements; while to those who are practically acquainted with the urgent difficulties of daily life, and the need of church accommodation for our vast population, it almost sounds like a feeble joke to be told that they are to allow our old churches to go to ruin, while they build new structures for living use, side by side with their crumbling fragments.

The harmony of historical conservatism with practical need and abstract beauty.

(III.) And now we return to the question, What is the modern architect to do? He cannot please every one. He cannot admit that all historical architecture is of necessity good, or all restoration bad, although he must recognise that a time of activity is a time of mistakes, as well as of successes, and that all restorations of ancient buildings should be presided over by a conservative jealousy of change. If he be called upon to adapt an old church, for example, to the needs of a vast congregation, let him be careful not to outstrip these needs, from any fancies of his own, or desire to comply with the ephemeral fashions of the day. If it be his duty not to starve the wants of the present, it should be his pride to reconcile them, as far as may be practicable, with the historical associations of the past. He must be guided by common-sense, as well as by sentiment, and must be on his guard against nostrums.

Among the latter is a too exclusive devotion to any one phase of bygone art, when such devotion leads to unnecessary interference with old work. Almost any of our old buildings are, as we have seen, an epitome of past styles. To this, they owe no inconsiderable part of their interest, and it is intolerable that all the latter should be sacrificed, as is sometimes the case, because the architect is persuaded that the 'Middle Pointed,' as he will perhaps call it, is the best style of architecture, to which everything should be made to conform. It is said, and justly, that this is the spirit in which our ancestors worked; they cared not for old forms, and removed them without scruple. Our case, however, is different. They worked in their own vernacular method, and knew no other; we are, at best, applying our grammatical knowledge of styles, which have ceased to be our familiar servants. It is not for us to construct an elaborate imitation of old work, and pass it off as a really

ancient building. This is, in fact, to design an elaborate forgery. We have no right, therefore, to enter upon a work of restoration, with the intention of seeking congruity, by the application of our individual tastes. To do as little as may be absolutely necessary, should rather be our aim, and we should not be afraid to let such necessary work tell its own tale, in the after history of the building.

Appeal against needless innovation.

If this be a needful caution to the architect, something may also be urged on those who are more immediately the guardians of our ancient churches—namely, the clergy. They have done great things in their generation, good and harm, mixed no doubt; but much more good than harm. To them, too, uniformity is at times a temptation. Inconveniences which would often be surmounted by patience, are sometimes grappled with at once, to the serious loss of the old historical associations of the building. A pulpit is too big, or too small, or, still worse, it is not in the fashionable style of the day. It must go, and the next time that some far-off wanderer revisits the church of his youth, all is changed, the well-remembered aspect of the place has become strange and unfamiliar. The reading-desk has vanished, the seats are rearranged; old glass has given place to new in the windows, and the stately if cumbrous pulpit has gone, in favour of a successor redolent of varnish, and in the newest style of so-called Ecclesiastical art. It cannot be unfair to remind all concerned, that our old buildings are held by them not as their own, but as a sacred trust; and that special tastes and fashions are, as regards them, out of place. The church belongs to the people, and it is not a fit arena for experiments, either of architecture or of ceremonial. It should be to us, as far as possible, the sign of eternal truth, fixed, clear, and unchangeable.

Lessons from the past.

We may learn a lesson, in these things, from the recent past. We know what was done by Wren at Westminster, and by Wyatt at Salisbury, with the best intentions doubtless, and, as was probably thought at the time, with considerable success. These were but types of what was going on in the country generally. What is thought of it now? The present objections to restoration owe much of their force to the active dislike which has been shown to such

operations. Are we sure that the time may not soon arrive, when many restorations, now extolled, will not be condemned in their turn? We may, at least, learn modesty from such reflections, and may cast in our lot with all true lovers of art, in wishing to confine our restorations within the limits of common-sense and necessity.

The Anti-Restoration Society and its attacks on architects.

To preserve and to protect our ancient buildings is the duty of every man of culture and taste, and it can scarcely be needed to found a new Society for this purpose. With its efforts, if presided over by good judgment, every architect, worthy of the name, must sympathise, and it is, I think, to be regretted, that the Society should have seemed to give any encouragement to the contrary conclusion.

We have seen, however, how difficult is the position of the architect who is called upon to deal with the question of restoration. He is not the master, and cannot control the variations of public feeling. The influence of a great national movement is not to be hampered or defied. If we have mistakes to deplore, we have also successes to chronicle, and at no time in the history of our art have conservative sentiments been so powerful, as they now are, among our best architects. Irresponsible critics have always an easy task: to them all is simple and straightforward, and they neither know nor care for the anxieties of the architect, who is called upon to act while they are talking. Why should it be found impossible to advocate the preservation of ancient buildings without assailing architects in general, and particularly some who have been most successful, and have shown both learning and judgment in their work? Their mouths are necessarily shut, but I feel bound to protest against such hasty accusations. I do so the more conveniently, because, although I yield to none in admiration of ancient Mediæval art, the caprices of professional employment have not led me much in the direction of restoration, and I can speak, therefore, with some of the impartiality of an outsider.

Few things have been more remarkable in the history of our time than the devotion of the architects of this country to the study of the principles and practice of our ancient architecture—a devotion unsurpassed, as I believe, in any

age or country. They are the last men in the world who can fairly be denounced as ignorant innovators, in one sweeping censure; or be entitled to the name, which has been pleasantly assigned to them, of 'architectural wreckers.'

The Conservative instincts of England.

It would, indeed, be strange if the English architect should be a destroyer or an iconoclast; not only is his native country rich beyond most others in all historical associations, but the very spirit of its policy has always been that of respect for antiquity. Our great monuments have ever been prized, ancient precedents have ever been followed in our legal tribunals, and at the Court of our sovereigns. We celebrate anniversaries, and venerate great memories. Our Houses of Parliament observe forms, handed down to them from olden times, and our legislators are surrounded by the monuments of the great statesmen, warriors, and sages of the past. It has not always been so elsewhere. The protection of the ancient buildings of a neighbouring country has not been so much regarded there, as it has been with us, as a labour of love. It has been more deeply tinged with that passion for newness, which has ever had a powerful influence on a nation of logicians. At the French Revolution ancient things were fused, as in a crucible, fired by a fierce hatred of the traditions of a detested ancestry. Old buildings were pulled down or desecrated, old institutions destroyed, and the very names of old places, times, seasons, and days of the week, were changed for new ones. We have never had so fierce a trial; our changes of public life have been like our changes of architecture, more peaceful and gradual. We are accustomed to add, extend, and reform, rather than destroy and invent; and our English architects have ever been foremost in the ranks of Conservative restorers.

True Conservatism not inconsistent with progress.

It is not inconsistent with this tradition that they should be unable to accept the position of idle observers of the decay of the great monuments left to us by our ancestors. It is their duty to look forward as well as backward, and they have to provide for the present, as well as to reflect on the past. In so doing, they do but re-echo the convictions of their countrymen, that each successive generation has its

own work to perform, and that the world will not be made happier or wiser by a listless worship of the past, and yearnings for 'good old times,' which can never return.

What, indeed, were these good old times? and ought we to wish them back again? We think so, perhaps, when we note the beauties of old masterpieces of art, and ask ourselves why we prefer the old to the new. It may be, however, that we are but passing through a transition, and are unduly impatient for its close. We see nothing but the evils around us. The ages distant from us have been well compared to some vast mirage in an Eastern desert. The spot on which we stand is, in our eyes, parched and bare, a dry and thirsty sand; while around us, on all sides, over the past as well as towards the future, we see an indication and a promise of wells and pasture, of green turf and refreshing waters. We refuse, as pilgrims, to be contented: our present position is intolerable. All about us seems so mean, so uninteresting, so inartistic, that we rush forwards, or retrace hastily our steps, only to find the mirage ever retreating before us—a mockery, a delusion, and a snare.

If there be anything in architecture that is worthy of the attention of earnest men, it cannot be that we are to look only to the past. We are bound to revere its memories, to sustain its glories, to protect its achievements. Its old buildings must be very dear to us; but we must still look forward. The doctrine of modern degeneracy is not to be silently accepted. It has been well said, 'If the golden age be past, it was not genuine.' Were it otherwise, our energies would be paralysed at the outset of our career. National progress assumes, it may be, forms which are new and artistically distasteful to us, and we, perhaps hastily, assume that all is wrong, and that we must try—alas! how unavailingly—to go back to that past which is gone for ever. Rather should we conclude that we have to seek in our own day the key to the enigma, and apply to the material progress which goes on around us, the refining and civilising influence of art. We cannot go back, we cannot re-create the old buildings, which we possess as our birthright. They often tell us of a state of affairs without counterpart in these modern days. These things were not of necessity

better than the things of to-day. If they are our inheritance, to be guarded and preserved, yet they are not to be recalled. Change passes on all things, and that which is appropriate to-day may have become obsolete to-morrow.

Conclusion to be drawn.

(IV.) Let us now consider the position at which we have arrived, in respect of restoration of ancient architecture. I have spoken to little purpose, if it be not evident to you that the question is not an easy one; and that the architect is by no means wholly responsible for its solution. This depends on serious considerations, which I have attempted to indicate, and on deep feelings in the hearts of men.

Architecture must be practical.

The architect, as a practical artist, has to take into account much that may be disregarded by the enthusiastic archæologist. He must use common sense in the application of his art; for architecture is for use, as well as for æsthetic enjoyment. His art, in fact, must be useful, if his art is to be used. In his works of necessary restoration, he must face many difficulties, and combat rival theories. When cases of doubtful authenticity are placed before him, he must know how to choose the good, and reject the bad. He must unite the sympathies of an artist with the needful services of the practical reconstructor. In so doing, he will distrust all dicta of fashionable taste, he will respect historical associations, and treat each case on its own merits.

No sweeping rule can be laid down.

You will say that there is nothing new in all this. Even so. It is the same old story since the world began. 'To refuse the evil and to choose the good'—this is the duty of man, and the architect must apply it to his art as well as to his course of daily life. It is impossible to lay down any fixed rules with respect to the restoration of ancient buildings. There is no royal road to the conclusion of the matter, which must be dependent on the learning, taste, and discretion of those employed.

Suggestion of the Institute of British Architects.

Long before any special Society was thought of, the Royal Institute of British Architects had fully considered the questions now raised, as if for the first time; and they drew up a paper of admirable rules to be observed, as far as practicable, in all restorations of old buildings. I cannot do better than advise those who are concerned in such works to obtain these rules, and to be guided by them. They will

at least prove to all, whether within or without the profession, that an affectionate regard for our old mediæval architecture has never ceased to be a ruling principle in the representative body of British architects.

The past, present, and future must all claim regard.

And now it is time to conclude. We accept in all sincerity the protests against over-restoration, to which allusion has been made. We are glad to welcome as assistants in our labour of love any associations of earnest men, while deprecating the extravagance of cliquism to which such associations are perhaps in some degree exposed. We value the past too much to deface its records, to tamper with its history, which belongs to the future, as well as to ourselves. For the rest, we must refuse to be bound too rigidly, and in new works we are not to try for an impossible resuscitation, but are to have some confidence in ourselves.

We are not to be for ever attempting to try back, when the difficulties of modern problems assail us. We are to preserve our ancient buildings, as far as this may be done without harm to the living, and without necessarily believing that such buildings would be suitable, if accurately reproduced, to the exigencies of society around us, which differs in essential particulars from that of the Middle Ages.

We are not called on to despair of art because the old is often better than the new. We will not forget the past, but we will do our best in the present, and also turn our eyes on the future. If the dead can speak to us, can we do nothing that shall be eloquent when we are gone? Shall it be said of us that we have only repaired the tombs of the Prophets? May we not rather draw from our studies of the past a fresh inspiration—an encouragement to new efforts of noble and elevating art? Surely there must be scope for such exertions, both now and in the days to come.

In the meantime, we must hold fast to what we have, while we must oppose the calm conclusions of common sense to the bidding of those who, making of the past fetters too heavy to be borne, would have us stereotype each antiquated blemish by reason only of its actual existence. We must not forget the living in our zeal for the dead. Yet we must uphold, repair, and, where necessary, restore our ancient architecture in a spirit of conservative jealousy of

unnecessary change; and to the mere materialist, who, eager for novelty, and caring only for the present, is ever ready to revolutionise with the vulgarity of newness, we may then fairly say, 'I will not give the inheritance of my fathers unto thee.'

LECTURE X.[1]

TOWN ARCHITECTURE AND MODERN PROBLEMS.

(I.) Contrast of the past and present in architecture.

(I.) We have traced, on other occasions,[2] the various stages of development in the domestic architecture of this country, and have glanced rapidly at the changes which gradually transformed the hall of the Saxon Thane into the Mediæval manor-house of the fifteenth century. From that period, the differences which ensued were differences of degree rather than of kind, and we find in the Elizabethan and Jacobean mansions arrangements which are, more or less, in accordance with the requirements of our own day. I may return hereafter to this part of my subject, but for the present I pass it by, in order to consider some matters of more general interest, affecting the transition from Mediævalism to modern life, and the problems with which the architect is consequently brought face to face, in the application of his art.

In London it is clear that old things have almost entirely passed away, and we have to deal with new conditions. The Great Fire destroyed the picturesque, but inconvenient, dwellings of Old London, and gave an opportunity for improvement, such as has seldom occurred in the history of a great city. We, in this generation, are not, happily, likely to have a similar chance; but great changes are nevertheless taking place amongst us, and we may usefully consider our principles of action in the architectural treatment of great cities, as well as the important laws which should govern such action, by subordinating our arrangements to the ascertained truths of economical and sanitary science.

Is good taste hopelessly extinct?

We often hear laments on the extinction of good taste. All, we are told, is common and vulgar, and we are daily

[1] Delivered on Thursday, March 22, 1877.

[2] See the Second Series of Lectures.

plunging into lower depths of artistic bathos. Railways and kindred inventions, which have done so much to increase the power of man over matter, are complained of as the executioners of art; and, in the opinion of some, all that we have to do is to seclude ourselves from such base associations, and draw gracefully around us the garment of refined exclusiveness, before we bid a final farewell to a vulgar and pushing world. This spirit is not uncommon: it finds vent sometimes in laments over all that has made our country great among the nations of the world, sometimes in pensive regrets over the colour of a fabric or the pattern of a coal-scuttle. It may, however, be doubted how far such despondency is to be justified by facts; and, still more, how far it is likely to be profitable for improvement in art. We may start by agreeing that ugliness is common enough, without conceding that it must so increase as ultimately to overwhelm us.

Is it less or more universal than in the past?

Good taste, if not common among ourselves, has always been the heritage of the few. Is there less of it at the present time? or is it the fact that the many have come more to the front, and that their requirements have thus acquired a special prominence? We are not able to assume that, even among the Greeks, good taste was common. The buildings which are left to us are precisely those on which we should expect to find that every resource of art had been lavished. Of daily life in ancient Greece we know little, and we cannot assume that it differed greatly from what our own would be under similar circumstances. Different times and circumstances lead to different manners, and the problems we have to solve, in this anxious and brain-busy nineteenth century, differ as greatly from those which presented themselves in the morning of the world's history, as do the grave pursuits of a modern philosopher from the happy and graceful gambols of a child amongst her flowers. Modern civilisation may sometimes seem to repress individuality, and its progress to resemble the march of an army, treading steadily with a common step. But this is not the whole truth. If it be true that it is rarely given to one mind to strike out novelty of a startling nature, and conquer by the flash of genius, it may be remembered that our army of progress resembles a column which never retreats, and in which each

backward rank treads in turn in the footsteps of the leading pioneers of progress.

Lord Macaulay's testimony to the scientific originality of the age.

I may here quote an opinion, on this point, of a great man, who has now passed away from among us, as far as his bodily presence is concerned, but whose name will never be forgotten wherever the English language is spoken—I mean Lord Macaulay—the history of whose life has lately been brought before us, with rare felicity, so as to cause us to add to our previous admiration of the historian and statesman a warmer feeling towards the man. Lord Macaulay asks, 'What is *meant* by the complaint that there is no individuality now? Genius takes its course, as it always did. Bolder invention was never known in science than in our time. The steamship, the steam-carriage, the electric telegraph, the gaslights, the new military engines, are instances.' All these things 'indicate rather a restless impatience of the beaten paths, than a stupid determination to plod on in those paths. So great is the taste for oddity, that some who have no recommendation but oddity, hold a high place in vulgar estimation.'

Necessary adaptation of architecture to its age.

Now, if it be true that we have fallen on an age of great scientific progress, it will not do for the architect to ignore hard facts, and to be for ever yearning for an impossible resuscitation of the past. In the imitative art of painting, the artist may forget the present if he will; he may people his canvasses with gods and goddesses; he may breathe the air of Arcadia or Elysium, and only return occasionally to the base sublunary ideas of modern life, when he needs to find a patron or to examine his banker's book. To an architect such pure abstractions are impossible. He must be of his own time, and has no claim to existence unless he ministers to its requirements. Men do not build in order to look at their work, but to use it. Happy is he who can combine beauty and grace with perfect fitness; for he is the true architect, and in him art and science have met together.

Limitation of the power of originality.

Students of art who intend to become practical architects should bear this well in mind, and should not allow themselves to be unduly discouraged by the gloomy prophecies of failure, in which too many indulge with a whimsical facility, and claim on the strength of this to be stamped at

once as authorities. The past is ransacked, and its styles of architecture are paraded before us. What, we are asked, is your style? Why do you not give us something new? The question to some extent answers itself. Men worked on formerly in ignorance of the progress of others. Now originality is hindered by the affluence of knowledge. The results of long and painful experience have to be included in one grasp, and our historical knowledge is the main hindrance to possessing a style of our own. Originality in architecture is now, as it has ever been, the divine attribute of genius. Architecture, as an 'art of utility,' cannot depend on the rare and uncertain appearance of original genius, however gladly she will ever welcome its advent. She has to take note of the accumulated knowledge of centuries, to strive after beauty while insisting on utility, and to guide her proceedings always with common sense.

The satisfaction of popular needs.

Unfortunately for architecture, it is an art which cannot be indulged in without a more or less considerable expenditure, and with the increasing price of modern labour, it must, in the highest forms, be out of reach of the multitude. Bear in mind that the great principle of modern social progress is care for the multitude, and their interests are now rightly placed everywhere in the foreground. There may be, and no doubt will be, as fine works of architecture hereafter as have ever existed in the past, but they may be obscured by the vast numbers of lesser things which are brought into existence to supply the wants of the masses. We lament, and unfortunately with good cause, that, whereas the workman of old took a pride in his work, and showed an individuality in it, we look too often in vain for the evidence of such principles in modern work. Some ascribe this result to the introduction of machinery, but this is probably to confuse cause with effect. It is the demand for labour which has raised its value, and has brought upon us the necessity for economising it, as far as possible, by machinery and labour-saving inventions. The world has obeyed the Divine command to increase and multiply, and the question has thus been raised, Is half the population to be without shelter, in order that labour may be lavished on the remainder? Modern civilisation gives a clear answer

to this question, and the architect, as the servant of his age, must strive to bring his art within the scope of her behests.

We find that in Mediæval times the hewers of wood and the drawers of water were housed in the roughest manner, and this was also the case with the common people and the slaves in Rome and Greece. We have too much reason to be dissatisfied with ourselves on this point; but much is now doing to remove the reproach, and there is consolation in the thought that, when evils are admitted by the public voice, their cure or mitigation in this country is seldom far distant. When this has been done, when our people have become well lodged, when education has begun to gather in its fruits of temperance, self-respect, and culture, I cannot but hope that art will have something to show for its share in the good work, and receive some reward in the hope of further progress. If for us architects the days of castle building be over, we may find a work, less showy perhaps, but as really noble, in educating the taste of an emancipated people.

Contrast on this point with ancient times.

(II.) Let us now consider for a few moments the peculiar requirements of modern cities as they present themselves to the architect.

(II.) The requirements of great cities —health and solidity.

Any large assemblage of people in one place must, of course, give rise to difficulties as regards the provision of healthy dwellings. A cottage standing in its own grounds may long be deficient in many things without causing more than a passing inconvenience. Soon other cottages are erected near it; these press one upon the other, till waste spaces are covered and houses touch. The ditches are defiled, springs are polluted, verdure is banished, and the air is thick with smoke. The former country hamlet is now the centre of a great town, the only home of its poor, and only too often the hotbed of crime and vice. What can architecture do in such a case but wait and plead, until the public sense of responsibility is roused to insist on the necessity of wholesome habitations for all classes? The architect may then point out the advantages that may accrue to the entire community by making arrangements, which, while removing reproach, may add interest, convenience, and beauty to our cities.

The homes of the poor.

Public buildings.

But it is with other classes of buildings than the houses of the poor that we have to deal. While these need not be ugly, they cannot, of course, add much to the architectural ornaments of a great town. Such ornaments must be looked for in the public buildings, the banks, mercantile offices, and the dwellings of the wealthier inhabitants. On all public improvements it has long been admitted that the public has a right to speak. But though the principle has been admitted, the application of it has hitherto been far from complete; and even in utilitarian matters it is to be feared that some terrible catastrophe may one day startle the public mind by the revelation of deficiencies in our legislation as applied to the buildings in large towns.

Theatres.

Take, for example, the case of theatres, and other places of public assembly. It was but lately that hundreds of victims perished miserably at the Brooklyn Theatre, New York; and there are theatres in London which I never enter without anxiety, or quit without a feeling of relief. We have no public officer, who can insist on the sufficiency of entrances and exits, proper width of passages, isolation from adjoining houses, and such matters. Stairs in new buildings must indeed be of incombustible materials; but they are too often narrow, ill-constructed, badly planned, and inconvenient, and the public has no choice but to submit. The evil is not only great but growing, for in these respects it is often our newest structures which are the greatest offenders.

Of course when anything is wrong people are apt to cry out on the architect, as if he were responsible; but this is not right. Wherever rents are high, as in London, land is dear, and the temptation to a lessee to recoup himself in every legal way is irresistible. A difference of a yard in the width of a passage may give an extra row of seats, worth hundreds a year to the manager; and he knows that the public, ever thoughtless when its amusement is concerned, will rush to a theatre, heedless of its hidden perils. I have mentioned theatres, not because they are the only buildings for which public control is needed, but because they are among the most obvious specimens of the class, which includes concert and lecture-rooms, churches, and all places where the public assembles in large numbers.

Want of official supervision.

We have suffered, as to these matters, by the very vastness of London, which has always hindered the establishment of a central municipal authority, charged with an effectual control of architectural questions; and as there is a daily increasing reluctance on the part of the Imperial Government to deal with metropolitan questions, Londoners are constantly falling between two stools, and have less power over their affairs than is possessed by the inhabitants of other English towns of far less importance. The Metropolitan Board of Works, although a modern creation, has shown itself alive to such responsibilities as the jealousies of public policy have allowed to be placed upon it, but it has suffered repeated checks from such jealousies. A well-meant attempt was made by this body some time back to obtain from Parliament such powers of supervision over theatres and public buildings as I have alluded to, to be used by the Board only in the interest of the public. Unfortunately, the application was refused; but it is quite clear to me that the question must be faced, and that soon, as one of serious importance.

Interference with the architect's responsibility.

In the meantime, architects are not only bound to try to arouse the public interest in these matters, but their own responsibilities are intimately concerned with their satisfactory solution. Their profession is one of the most anxious, and, I may add, thankless, in existence. If there is anything wrong in our houses, it is always the architect who is accused, and no one thinks or cares to inquire how far he has been controlled or overruled. Indeed, he is made answerable in thousands of cases as to which no architect worthy of the name has ever been engaged, and in some of our most important works public bodies appear to wish to deliberately ostracise the best men, by insisting on the lottery of competition. Now, I yield to none in affirming that an architect must bear all fair responsibility; but if it be made clear that our public regulations are insufficient to secure good building, and even to provide for the safety of the public, it is evident that in this free country, in which the popular voice is all-powerful, the real responsibility must rest with the public itself.

Architects are constantly publicly instructed with em-

Causes militating against solidity of building.

phasis by self-constituted advisers as to evils in our buildings, some of which are imaginary, and others well known to them already; and remedies are presented with all the confidence natural to irresponsible critics. But it is forgotten that such remedies would frequently bring inconveniences of their own, and that they are generally costly, and would therefore raise rents. Houses in London are, moreover, mostly built on land which is leased for a term of years, which, I am sorry to notice, is becoming more and more restricted in some recent leases. Doctrines of tenant-right have not reached the metropolis; but it is idle, in my opinion, to hope for substantial improvement in our domestic architecture, as long as men are called upon to build for the ultimate advantage of others. It is scarcely too much to say that in solidity of construction and in provisions for safety in our places of public resort we are behind most, if not all, of our European contemporaries. These are matters which are most important to the architect, for without good and solid construction architecture is a sham. We know how careful the Romans were as to the corridors and exits of their theatres, and their work will remain as a guide to future ages after many of the flimsy structures of to-day have totally vanished. If the architect be, as I have said, greatly interested in these questions, they are to the public of vital moment, and it is for the public to deal with them through its chosen representatives. It is useless for an architect to provide exits in his plans, which are afterwards built up and disused because each doorway is a source of expense to the management; and there is no encouragement to design good houses as long as people prefer low rents to healthy homes.

The public interest therein.

In country places, where buildings are, perhaps, placed in spacious parks, isolated from all contact with others, it may, doubtless, be contended that any regulations in the interest of the public are uncalled for, and would be an unnecessary interference with individual liberty. But in towns the case is different. Here a man cannot live only for himself; he must so enjoy his own rights as not to injure his neighbour's. The principle of building regulations has long been conceded, and it only remains to determine their extent

and application. Such regulations are, indeed, essential to the well-being of the community in modern cities.

(III.) Selection of materials. Use of wood.

(III.) Another important point in our civic architecture is the selection of materials, as bearing on both the artistic and the utilitarian side of our art. We have most of us admired the timber houses so much in favour with Mediæval architects, and some are doubtless found to regret their disuse, and to declaim against any prohibition of such a manner of construction in our modern towns. A careful study of old timber houses will show us that their beauty depends on the sensible application of true principles of construction and decoration, designed with a careful recognition of the essential characteristics of the material employed. The forms of all corbels, windows, and roofs are such as are suitable for wooden constructions, and for no other. But we do not find that wood was chosen by our ancestors, except from necessity. It was at hand in the great forests and woods of a sparsely populated country; it could be worked with simple tools, and quickly erected. Carriage was easy for it, as compared with more solid and weighty materials; it presented, in fact, the cheapest and easiest method of housebuilding; it was, consequently, generally employed, and the old builders brought to bear upon its construction all their skill as well as their knowledge of art for its ornamentation.

Changed conditions of modern times.

In modern architecture wood bears a more subordinate place, and in so treating it we do but follow the same principles of common sense which guided our forefathers. They built chiefly in wood, because they had practically no choice but to do so. We have materials of all kinds brought to our doors, and, if we attempted to employ wooden construction as they did, the material would soon reach a famine price, and ultimately fail us. Thus, while we may not copy their practice, we may well be guided by their principles, and may study in a similar spirit the qualities of the materials we employ, with a view to that rational application of ornament which has ever distinguished good art from bad.

Fireproof buildings.

Having already spoken to you on the question of materials and their effects on originality of architectural design, I will not dwell again upon that part of the subject. But

in respect of fire I may, perhaps, be allowed to say a word as to the use of incombustible materials in our dwellings and public edifices. We do not need to be reminded how terrible an enemy fire is to architecture and to human life. We know what it has done in former times to London, and the misfortunes of Chicago and Boston are recent. Hardly one of our theatres has escaped, and few even of our cathedrals have not been injured or threatened. It is therefore unnecessary to say that architects are bound to study this question, which is far from simple. Where a great body of fire exists, as in a warehouse stored with inflammable substances, such materials for supporting fire bear so large a proportion to the constructional portions of the building that the latter are simply overwhelmed, and wood, stone, iron, marble, and brick are involved in one common ruin. This has led some persons to think that a fireproof building is impossible, and perhaps, in the strictest sense, it is. Not so, however, practically, in the vast majority of cases with which architects have to deal. Because iron and stone have yielded, when exposed to intense heat, it does not follow that they may not be employed with advantage when all the circumstances of each case have been fully considered; and I cannot subscribe to the doctrine that in public buildings it is better that the stairs should be made of wood, which will burn, rather than of stone, which will not.

Domestic. There is and should be no difficulty, at any rate, in so constructing our domestic architecture that the existence in our houses of any large body of flame, sufficient to cause danger to materials not in themselves capable of ignition, should be a physical impossibility. Unfortunately, this is seldom or never done, from causes to which I have already adverted. Houses are built to last for a term of ninety-nine or even eighty years, and their builders prefer to pay premiums to fire offices rather than to invest additional capital in their buildings, so as to render them permanently safe from danger by fire.

Public. The application of incombustible materials to ordinary buildings is still in a backward state in England, more so by far than it is in France, and with reference to theatres it has scarcely been seriously attempted. In these buildings

the stage and its appurtenances must probably be always more or less inflammable, although chemistry may help us in this respect; but, as regards the auditorium, no difficulty exists which is not to be surmounted by any skilful architect, and a dangerous fire in this portion of the building ought to be an impossibility.

It is indeed even now panic rather than actual fire that constitutes the most terrible danger in case of accident; and if the audience were conscious that the construction was as it should be, if they saw wide corridors and ample staircases of materials which will not burn, we should never again have to deplore such a calamity as the American catastrophe, already adverted to. In the present condition of many of our theatres, it is quite right for the Lord Chamberlain to regulate the number of chairs, and to insist whenever he can on any precautions against the spread of fire which his experience may suggest; but the evil is hardly touched by such palliatives. We require regulations as to plan and construction at the outset. It is not enough to seek to improve our dangerous structures, but the construction of similar buildings should be made illegal. I leave this subject as I began, by saying that the matter is one not only or chiefly of architectural importance, but of public interest, to be dealt with by our rulers as soon as they have come to be in earnest on such questions.

(IV.) Introduction of external colour in London. The smoke difficulty.

(IV.) Passing from the class of considerations which determine the choice of materials on constructional and utilitarian grounds, we may briefly allude to that of colour, more especially as applied externally. And here we confront the great enemy of architecture in our large English towns; I mean smoke, with its attendant evils, which destroys many of our materials, and injures the effect of all of them; which often renders abortive the best studied designs of chiaroscuro, and reduces our buildings to a dull monotony of depressing dirtiness. And this is not all, for dirt more than climate affects our designs, and we cannot indulge with any freedom in the balconies, loggias, and recesses, common under more favourable conditions. Is it too much to hope that science may some day come to our aid, and deal with private chimneys in the same way as it has done with the greater offenders belonging to manufactories, steamers, and

public establishments. It was, I believe, to the energy of Lord Palmerston, relegated for a time to the supposed uncongenial duties of the Home Office, that the latter vast improvement of the smoke question was due; and, if so, it may serve as an illustration of the old truth, always recognised by really great men, that 'whatever is worth doing is worth doing well.'

Difficulties of materials.

But whatever improvement science may have in store for us in the future, we must deal as well as we can with the existing state of things, and if we are able to introduce the joys of colour into our streets, we may well be glad to do so. It is very difficult, however, to effect this satisfactorily. Effects of colour, if they appear to spring naturally and without effort from the materials employed, will be satisfactory, always supposing that such materials are appropriate to the purpose for which they are used, and in harmony with the main lines of the architecture. Otherwise, external colour is too often vulgar and offensive, and seems to serve no further purpose than to display an affectation and straining after illegitimate effect, which is fatal to repose and to all principles of true art. The first æsthetic necessity of architecture is that of apparent solidity and permanence. We must not, therefore, in our climate, indulge in the external use of coloured marbles, which only serve to invite and indicate decay. Glazed tiles and pottery have not, as yet, been very successfully employed on any large scale, and the necessary smallness of their parts will always render them more suitable for mere prettiness than for dignity of treatment, such as we look for in important buildings. Polished granite is free from this difficulty, and, if its costliness could be got over, might serve us admirably in our smoky and dirty streets. The use of such a material would necessarily modify our architecture, and compel greater simplicity in details and mouldings, which would be far from an unmixed evil.

Internal colour.

The application of colour internally has been practised in all ages. In the majority of cases of domestic architecture it is less a question for the architect than for the individual taste of the owner. In public buildings, however, it is unquestionable that coloured decoration is one of

the most powerful aids to effect at the disposal of the architect.

St. Paul's. We all remember recent discussions as to the decoration of St Paul's, and cannot believe that Wren would be contented if he could see his *chef-d'œuvre* in its present unfinished condition. I am not going to plunge with you into the mazes of this thorny question; but it is, I think, impossible to compare the state of St. Peter's at Rome with our own St. Paul's, and then to rest contented with a do-nothing policy in respect to the latter. Some critics have affected to speak contemptuously of St. Paul's, so that it might seem that it is of little consequence whether anything be done or left undone. I may, perhaps, be allowed to remind such persons that it is not very long ago that the word 'Gothic' was only used contemptuously, so that Horace Walpole, who speaks of his head as being 'filled with Gothic story,' nevertheless complains that no one agrees with him, and laments that 'the general disuse of Gothic architecture and the decay and alterations so frequently made in churches give prints a chance of being *the sole preservatives of that style.*' Fashions change, and we in these later days have become so accustomed to hear the rival word 'Renaissance' applied as a term of reproach, that it is necessary to remember that great reputations, whether of men or of buildings, are, for the most part, based upon solid claims.

St. Peter's. I have before quoted the views of Lord Macaulay on the question of originality, and you may, perhaps, feel as interested as I was on learning the effect produced on him by the first sight of St. Peter's at Rome. He had, of course, read and heard a great deal about it previously, and was prepared for much—a state of mind often the prelude of disappointment. He writes in his diary of 1838: 'Walked straight from the hotel door to St. Peter's. I was so much excited by the expectation of what I was to see that I could notice nothing else. I was quite nervous. The colonnade in front is very well—very, very noble, yet it disappointed me, and would have done so had it been the portico of Paradise. In I went, and I was for a moment fairly stunned by the magnificence and harmony of the interior. I never

in my life saw, and never, I suppose, shall again see, anything so astonishingly beautiful. I really could have cried with pleasure. I rambled about for half an hour or more, paying little or no attention to details, but enjoying the effect of the sublime whole.'

Lord Macaulay's testimony.

Such was Macaulay's first judgment on St. Peter's—a judgment which subsequent visits only confirmed. I notice his opinion, not as coming from one who had made art his special study, still less as the verdict of a professional art critic, who is almost bound to prove the necessity of his existence, as well as his superiority, by finding fault. Macaulay was neither of these, but he brought to the question an unprejudiced and widely cultured mind, which gives weight to his opinions, and which may, perhaps, help some of us to rise superior to the narrowness too often engendered by fashion in art. Referring to the coloured decoration, and particularly to the mosaics which abound in St. Peter's, he says, after another visit: 'The best portraits of the great men of England, reproduced in the same material, beginning with Holbein's Wolsey and More, and coming down to Lawrence's Wellington and Canning, would be worthy decorations to the new Houses of Parliament. I should like to see also the walls of St. Paul's encrusted with porphyry and verd-antique, and the ceiling and dome glittering with mosaics and gold.'

There was a time when any suggestions for the artistic adornment of the Palace of the Legislature fell on sympathetic ears, and the care of such matters was entrusted to a Royal Commission, on which the Consort of the Sovereign deigned to serve, and of which his was the moving spirit. Now, this is one of the many things which serve to remind us of the irreparable nature of the public loss, and the evidences of the arrested schemes of artistic decoration are eloquent of the Prince, who gave up his blameless life all too soon for the public good. Macaulay's suggestion stands, however, and a day may yet come for its consideration. He went again and again to St. Peter's, and at last writes: 'To St. Peter's for the last time, and rambled about it quite sadly. I could not have believed that it would have pained me so much to part from stone and mortar.' With this

quotation I will leave the consideration of the effects of colour on internal architecture as a question which, as I have already said, has been generally decided in the affirmative.

(V.) Domestic architecture.

(V.) When we have settled the arrangement of our towns, and decided on appropriate materials, we have yet to consider the probable future of our domestic architecture, and we shall find here much to occupy our attention. With regard to the houses of the rich, there has certainly arisen improvement, as far as external effect is concerned, though their internal finishings lack, too often, both the solidity and refinement of their predecessors, of so recent a time even as that, for example, of the Brothers Adams. But there is no doubt that there is a disposition to improve; and without entering into details of design, on which much difference of opinion will always exist, we may all rejoice to see stucco making way for stone, and even for granite.

Improvement of taste therein.

It is natural, under the circumstances which I have attempted to describe, that there should be great differences of opinion on matters of taste. Taste is, too often, a mere matter of fashion, and however unreasonable a fashion may be, no arguments, and no ridicule, will affect it for a time. Afterwards there comes, indeed, the inevitable recoil, and then the sober conclusions of good sense resume their sway. So it is with architecture: we have had no lack of eloquent denunciation of the works of Michel Angelo, of Wren, of Inigo Jones, and other illustrious artists, disposed of under the title of the 'pestilent' Renaissance. On the other hand, we heard but recently a war-cry of defiance from a well-known Member of Parliament, declaring that, if there be anything to complain of in the present position of our architecture, it is the direct result of the great 'Gothic revival' of our time. Without necessarily casting in our lot with extreme theorists, we may, I think, fairly note with satisfaction the increase of interest in architectural questions, and the spirit of improvement, particularly in our large towns, which is generally apparent. It seems, indeed, incredible that any critics who have eyes to see the changes that are going on around us, and who remember the days when streets like Gower Street were possible, should do their best to dishearten improvers by their pessimist declarations.

It appears to be a palpable ignoring of obvious facts to deny that our public and commercial buildings, and the houses of the wealthy, are now designed with a care and attention to architectural beauty, which is a healthy sign of progress.

Houses of the middle class.

The great and difficult problem of providing houses for the necessitous population is surrounded with perplexities, not the least of which will be to secure the application of the improved dwellings, when built, to the purpose for which they have been erected, so that they may be used by the class for which they are intended. Yet under our present circumstances, it is not for the artisans, but rather for a class just above them in the social scale, that our sympathies are chiefly due. Our artisans have had years of high wages and increasing prosperity, and have prospered accordingly, while our clerks and lower middle class, particularly those with fixed incomes, have had to encounter, as best they might, the effects of rising markets and practically diminished resources. Now that the provision of healthy houses for the poor is beginning to be recognised as a public obligation, I am not without hope that the principle of co-operation, not in any eleemosynary sense, may be applied to the houses of the middle class.

It is this principle which, in our clubs, gives to the member who enjoys a mere pittance of income, the comforts and luxuries which only the possessor of thousands can command in his own house. It is the same principle which enables the poor man to travel as safely and rapidly as the millionaire; it is the principle which has brought to the houses of all of us comforts for which kings and princes have formerly sighed in vain. But it has as yet been very partially applied among us to dwellings.

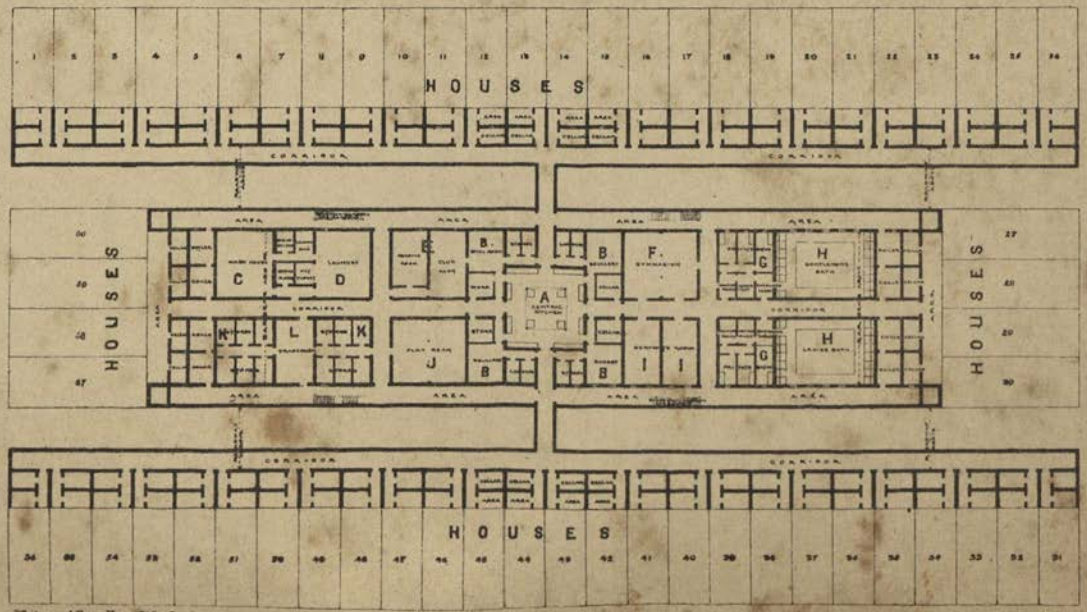
The principle of co-operation—flats.

It is true, we have a few expensive 'mansions,' where we may live in 'flats'; but there is so strong a feeling amongst English people in favour of having a house of their own, and the requirements of family life, in health and disease, are so various with us, that it is doubtful whether the flat system be capable of very extensive development in this country. None the less is it evident that the separate house system is, of necessity, wasteful and expensive. Might it not, there-

A. CENTRAL KITCHEN.
B.B. KITCHEN OFFICES.
C. WASH-HOUSE.
D. LAUNDRY.
E. CLUB & READING ROOMS.
F. GYMNASIUM.

SUGGESTION FOR A LONDON SQUARE
BY E. M. BARRY R.A.
PROVIDING KITCHEN, BATHS, AND OTHER ACCOMMODATION, UNDER GARDENS

G.G. PRIVATE BATH.
H.H. SWIMMING BATHS.
I.I. SERVANTS' ROOMS.
J. PLAY ROOM.
K.K. STORES.
L. TRADESMEN'S HALL.



Whiteman & Bass, Photo-Litho London.

fore, be possible to remedy these evils and yet retain the separate house principle?—to establish economy of service on the principle of co-operation, while retaining the substantial advantages of the habits of life to which we are accustomed, and to depart from which would be distasteful to most Englishmen? If we are to seek the advantages of living, to a certain extent, in common, must we lose the privacy we so much value? and is it necessary that we should take up our abode in barracks, piled up perhaps to a tenth or twelfth story?

Suggestion of plan for combining separate houses with common offices.

It has often struck me that in laying out our towns, provision might be made for correcting some of the objections I have referred to. Take the case of squares, for example. Here we have rows of houses surrounding a piece of land, which is planted and turfed, and is of considerable value. Why should it be wasted? Without withdrawing it from the nursemaids and children, who now principally use it, not very freely, might it not be possible so to utilise the subsoil as to provide for the houses around the square most, if not all, of the advantages which the flat system proposes to give?

The central kitchen.

I have placed before you an illustration of my meaning in a plan for such a square as I have hinted at. I have supposed a square of about seventy houses, inhabited by middle-class families. Each house would be complete, as at present, in respect of the sitting and bed-rooms. The kitchen and offices, common to all, are placed beneath the garden in the square, which, with the exception of a small space in the centre, of about 25 ft. long and 10 ft. wide, would be turfed or planted in the usual way. The kitchen is in the open central space. It is covered with a skylight, and has abundant provision for ventilation. It would be invisible from the houses, as it would be surrounded by a glazed conservatory or greenhouse.

With the exception of the small space occupied by the kitchen skylight and the surrounding conservatory, the square would be turfed and planted as at present, with openings in it occasionally, to light the offices below. The offices would only occupy a small portion of the subsoil, and above them there would be sufficient thickness of earth to support

vegetation. An instance of this arrangement exists in the gardens of Parliament Square, Westminster, close to the Houses of Parliament, under which the Metropolitan District Railway now passes. These gardens are, as regards flowers, among the most brilliant in London during the proper season.

The square would not have equal sides, but would be oblong in form, and the houses at the narrow ends of it would be built in the garden, with which they would communicate by means of terraces. By an arrangement of the levels, such terraces might be raised sufficiently to allow of the construction beneath them of rooms, built above ground, and with windows. These would serve as living rooms for such of the servants of the establishment as might be required to live on the spot.

The communications with the houses

In the conservatory, the waste heat from the kitchen would be utilised, plants and flowers would be kept alive in it, and it might also serve as a winter-garden, for exercise and recreation. The kitchen is surrounded by the other offices, radiating from the centre, and passages lead outwards in four directions to the four sides of the square. These passages pass under the roads, and establish a mode of optional communication with the basement of each house. Such communication might take place by means of a door, to be locked at night, like any other outer door, or there might be a window, with a turnstile through which food could be delivered. There would be a call-bell and speaking-tube from each house to the office of the controller, or officer in charge, of the kitchen establishment.

Incidental advantages.

Beneath the underground passages there would be subways, in which all drains and pipes would be placed, in such a manner as to render access to them easy in case of need. Any required service of steam, hot and cold water, gas, or hydraulic power, would be supplied to the houses from the central establishment, much more directly and economically than by separate arrangements. Each residence might in this way possess a lift, without needing special or expensive machinery. Cooking would probably be carried on chiefly with gas, and the products of combustion from all stoves and fireplaces in the offices would be carried off by shafts, built

as turrets at the corners of the houses at the small ends of the square, and so constructed as to consume them. These turrets would also form the boiler flues, and would be available for ventilation and for water-supply. In connection with the latter, swimming and other baths could be provided for the two sexes, and thus promote health and useful exercise with the rising generation.

It would be the duty of the controller to receive and execute all orders, and to exercise over the whole establishment the same vigilance and economy which rule our clubs. All expenses would be booked and charged to the proper person, the bills to be paid weekly, and the cost of the establishment to be defrayed by a subscription or rate levied on the houses, as is now done for the maintenance of the square gardens, and managed by a committee of residents.

Such are the heads of a scheme which, if there is anything in it, may perhaps be worthy of discussion, and may some day be worked out in detail. It does not, of course, address itself to those who maintain large establishments and think little of economy. It does not profess to secure all the advantages of complete separation. But it is an attempt towards middle-class co-operation in defraying the great and increasing cost of living, and of building operations, in our large towns. It suggests an effort towards combining privacy and comfort, with the economical and other advantages of co-operation, to a greater extent than appears possible in huge tower-like buildings, laid out in flats, approached by a common staircase. The danger from fire in these great blocks is a contingency not to be thought of without a shudder, while the height is extravagant, and the inmates, particularly the young, the old, and the infirm, are dependent on mechanical contrivances, which may fail them in their hour of need.

Increase of economy and efficiency.

In the construction of the houses round the square, there would be much saving of cost, and consequently of rent; for there would be no need of separate kitchens, sculleries, &c., with their wasteful fireplaces, in each house. All that would be wanted would be a small reception kitchen, in which food could be kept hot, and where any simple cooking could be carried on. It would not, therefore, be necessary to extend

the houses as far backwards as is now done to provide space for the kitchens, so that less ground would be occupied, and there would, consequently, be a saving in ground-rent as well as in the cost of building. The coal bill would, of course, be lessened, and each house might be warmed, inexpensively, by pipes from the central establishment. The necessary domestic service would be reduced to a minimum, and a small staff of cooks would suffice, where now one to each house is required. Moreover, a better style of *cuisine* would be brought within the reach of those who, in spite of having to give increased wages, find themselves daily more helpless in this respect, so that efficiency and economy would be alike promoted. It must be evident that our present system of separate living is extravagant, and that it would be easy for one establishment to supply the wants of a large number of separate families. If we assume the existence of seventy houses in our square, with an average number of six inmates to each house, the total of 420 persons is no more than our hotel and club managers are accustomed to cater for daily as a matter of course; and in such places the trouble and expense of providing must be much more than in the case we are considering, of a collection of quiet middle-class households.

It is not, of course, to be contended that there will not be drawbacks in all plans of co-operative living, but the problem seems to me to deserve consideration, and it is one which will, I think, press more and more to the front, under the social exigencies of our time.

(VI.) Improvement of public taste for beauty.

(VI.) It is desirable, therefore, for architects to recognise the needs of their contemporaries, so as to be ready for any calls that may be made upon their ingenuity and taste. They may find their recompense in bringing their art to bear upon objects which seem at first unpromising, and they may rely upon it that no measure will be so effectual in forming and bringing out a taste for art among the people as that of improving their domestic architecture. Without such taste among the public, isolated efforts will be of little avail, for it is useless to place good things before a tribunal which does not know how to refuse the evil and choose the good. Nor need we doubt that the real requirements of our countrymen

are capable of being reconciled with the principles of art. Without going so far as some writers, who maintain that whatever is useful is beautiful, we may admit that architecture will never please, if it be not consistent with truth and reason. To press this conclusion too far, as is done by those to whom I have alluded, would force us to condone the ugly structures with which our engineers have been, most improperly, permitted to disfigure our towns—a conclusion which no one in this place, at any rate, can accept.

The public responsibility in this respect.

In this matter, as in those of municipal regulations, and the construction of theatres and public buildings, it is not right to condemn the agent, when we should fix the responsibility on the principal. Our engineers have shown themselves masters of the science of construction, and if we now awake to complain of deformities, the fault rests not on the engineers, but on the public, who, by their representatives in Parliament, daily allow bills to pass which hand over our towns and country valleys to the tender mercies of a company, intent only on dividends. If the engineers do their duty to their employers by making their constructions as cheap and often as ugly as possible, the public has no right to complain of the consequences of its own act; although we, as artists, must deplore the absence of such a general and cultivated taste among our rulers, as would render it impossible to disfigure the land by Act of Parliament.

The relations of utility and beauty.

We cannot admit that art and beauty are to be thrust aside by a spirit of strict utilitarianism, such as that which contends, for example, that we must not call our ironclad navy ugly because 'the beauty of a thing consists in its complete adaptation to the ultimate purpose in view.' This defence was made, not long ago, by a distinguished naval architect, in reference to our later ironclads, than which nothing uglier has ever been contrived to float or to sink. I fear that our experience is too imperfect to allow us at present to admit the claim of complete adaptation to their purpose of being perfect ships of war; and though we may sympathise with the naturally one-sided views of parental partiality, some of us may find it impossible to forget a picture we have seen within these walls, in which a distinguished artist found his best success, in delineating a recent

ironclad, by concealing her details, and hiding her form, as much as he dared, by smoke and flags. These are resources which unfortunately are not open to the architect, and we must therefore scrutinise closely any claims which render such palliatives necessary. If we are to accept the claim of usefulness, in all its fulness, it has been well pointed out that we may be expected to apply it to music, so as to call the shriek of the railway whistle beautiful, because it is well adapted to its purpose of being distinctly heard at a distance.

The function of imagination.

We know, however, as architects that, although we are bound to consider utility, utility alone is not art. The one addresses itself to the wants of our lower nature; the other appeals to the mind—to that diviner part of us which enables us to claim the highest and noblest attributes of humanity, created in the likeness, however marred and partial, of the Most High. We are not to be told that science is all-in-all, and imagination nothing. Material interests may powerfully affect the course of nations; but the higher feelings of conscience, sensitive to the principles of truth and justice, will ever make themselves heard in public affairs. So it is with architecture. We dare not make it a trade, but must ever claim for it the full position of a fine art. True, it must justify itself by common sense and by a proper adaptation of means to the end in view; but it must do more than this, for it must delight the mind and satisfy the yearnings of a cultured imagination.

It is reasonable and right that we should do justice to the scientific spirit of the age, which has given us the marvels of the steam-engine and the electric telegraph; but we cannot forget that man is not altered by these discoveries. His powers over nature are enlarged, his cravings for knowledge are more easily satisfied, but he is nevertheless the same. Can he solve the great mysteries of life and death any better than when the world had just been born; or can he look forward into the future with more confidence than his forefathers of thousands of years ago? No, indeed! however much the mechanical side of our nature may have acquired, the imaginative and emotional cravings are the same as they have ever been, and among these is the love of beauty in art.

What was beautiful thousands of years ago is beautiful now, and the perfection of the human form divine was first displayed by the first man.

We need not, I hope and believe, despond as to the future before us, in which mechanical ingenuity threatens, according to some, to thrust out beauty. Men will never be satisfied with stones instead of bread, and will still appeal to art to satisfy the higher aspirations of the soul.

The æsthetic duty of architecture.

Architects must rise to their mission of ennobling common things, remembering that, if utility claims to be a power in their work, a refined love of beauty must be the governing principle. We cannot call that architecture which neglects the latter. It may be building or engineering, it may give us useful structures and powerful ships; but it is not architecture. We may value it as serving our wants, and possibly as promising a better future; but we refuse to it the name of art. There is a passage in the thirteenth discourse of Sir Joshua Reynolds which refers to this subject so felicitously that I cannot do better than quote his words. After speaking of architecture, and pointing out that it does not come under the same rules as the imitative arts, he says: 'There is in architecture, as in painting, an inferior branch of art, in which the imagination appears to have no concern.' Architecture 'does not, however, acquire the name of a polite and liberal art from its usefulness, or administering to our wants or necessities; but from some higher principle. We are sure that in the hands of a man of genius it is capable of inspiring sentiment, and of filling the mind with great and sublime ideas.'

The place of the sister arts.

The interest of architecture is indissolubly connected with those of its sister arts, which appeal more directly to the masses. To our painter brethren we look, more particularly in the first instance, to endow the masses with a sense of beauty. The surroundings of their daily toil are too often mean and ugly; but our picture galleries should be to them and to us havens of rest and a paradise of beauty. Here we may forget, for a while, the troubles of life, the anxieties—well for us, if we should not say the greed—of money-making, with its debasing associations. Here we rise into a purer atmosphere, as we contemplate the crea-

tions of genius, which have brought to thousands messages of peace, because they are based on the hopes and the affections of human nature, always and everywhere the same. The great painter touches a chord in man's heart, which will never fail to vibrate when properly approached. The love of beautiful things may be deadened by the commonplace ugliness of the workshop or the factory; but it is a suspended animation; it is not dead, but sleepeth. I have said that we look to the painter to pave the way for the enjoyment of architecture, for, in the case of the latter, the appeal must always be to a cultured intelligence, apart, that is, from an admiration of mere bigness, such as would class the pyramids among the architectural triumphs of the world. But we also appeal to the painter, as well as to the sculptor, to work hand-in-hand with the architect. This co-operation is, unfortunately, but too rare, from a combination of causes, into which I cannot enter at the end of my lecture, but without it we cannot hope for perfection, and for nothing less must we strive.

(VII.) Conclusion.

(VII.) And now, in conclusion, let us believe that there is a place in this nineteenth century for art, and especially for architecture. We must not be impatient if each succeeding age develops new characteristics, nor must we quarrel with the stream of progress if it make to itself new channels, leaving wastes and shallows where once swept a deep and silent flood. Rather let us be confident that we are not placed in this our own time, to repine at our lot, and indulge in complaints that others have been better off than ourselves. Let us further be sure, that as long as the love of beauty is implanted in the human mind, it is treason to art to declare the latter incompetent to deal with the problems of its day.

To us, as architects, such reflections are, perhaps, especially needed. We see around us, on the one side, the calm majesty of the great masterpieces of our art, which have received the admiration of ages, and are venerable, if only from the hallowing influences of time; while, on the other hand, we are jostled out of our places by the bustling energies of builders, surveyors, and engineers, careful about the immediate present, heedless of the past, and thinking little

of the artistic future. We are assailed by a multitude of teachers differing the one from the other, and agreeing only in the confidence with which each believes in himself.

The popular functions of modern architecture.

Architecture is, in a sense, on its trial, and if it is to take the high place which alone it can fitly accept, it must satisfy the wants of men. It may not be for us to rear structures vying with the stately cathedral of old, expressing, in its solemn beauty, the hopes and fears of generations passed away, and speaking to us, as nothing else can speak, of the vanity of earthly grandeur. It may not be for us to crown the hills with castle-palaces, the symbols of oppression and wrong—the stronghold of the powerful, the prison of the weak. It may be that the age of lavish architectural display is past; but are we to conclude that there is nothing left? May not architects yet find success in bringing art to bear on the tastes and habits of millions, and so obtain consolation for the absence of the more selfish isolation of the past? To walk hand-in-hand with science, to welcome art wherever it may be found, to strive to give Englishmen healthier and happier homes—surely these are not light or unworthy objects.

If the conventional or utility-seeking quality of Architecture be sometimes urged against her title of a fine art, she may, perchance, find in it her most complete justification; for hers is not a mission of trifling, or mere pleasure, but rather one of deep and earnest sympathy with the wants, as well as with the artistic feelings, of all classes of men.

SECOND SERIES

HISTORICAL

LECTURE I.[1]

EARLY MILITARY ARCHITECTURE.

(I.) BEFORE proceeding to review the progress of Domestic architecture in this country, we may glance at some of the early phases of architecture in Europe, after the cessation of the Roman dominion. (I.) Early domestic architecture.

In the first place, we may remark how gradually changes were adopted. The Roman brought his house, as well as his laws and religion, with him. He had no temptation to assimilate his manners to those of peoples whom he despised as inferior to himself in civilisation. '*Væ victis!*' was the cry of the day, and conquest produced uniformity. A Roman house was, therefore, substantially the same, wherever it was built. The principal feature, the atrium, was the precursor of the hall of later times, and has influenced, more or less, almost the whole of the purely secular architecture of after-ages. The hall, indeed, gained in importance as civilisation advanced, up to a certain point, and then declined, as the desire for privacy arose, and softened manners assumed an influence over Mediæval roughness. The Roman house.

When the rule of the Romans ceased in these islands, their successors adopted their modes of building, and followed the precedents left by them. The covered atrium was not only the chief part of the house, but even the house itself. Divided, as the Saxons were, into clans and families, and living together for mutual protection, no great care was given by them to fortifications, and a mere wall of defence surrounding their dwelling, or groups of dwellings, appears to have proved sufficient for safety. The Saxon house.

[1] Delivered February 7, 1878. The whole of this Lecture, as the references in the text show, is largely indebted to M. Viollet le Duc's *Military Architecture of the Middle Ages*; of which an English translation has been published by Mr. Macdermott (J. H. Parker, 1860).

The Norman castle.

This simplicity of life did not last, and our Saxon ancestors were rudely awakened from any dreams of security by the Norman Conquest. The tenure of the Norman was that of a conqueror, bound to maintain his footing by force, as he had gained it. He came from a country more advanced in civilisation than England. Proud, haughty, and chivalrous, he, like the Roman, expected to impose his will on others, to force them into his ways, not to follow theirs with them. Then came the time of Norman keeps and strongholds; the house had become a castle. The rule of might was symbolised by the architecture of the day. Strength and solidity were the qualities aimed at, and these were secured by the forced labour of a subject population.

The castle as a monument of forced labour.

The great castles are thus one more of the many illustrations of the dependence of architecture on the combination of human labour. However elevated may be the thought of the designer, it must be embodied in a concrete form to become architecture. Leaving artistic considerations out of the question, there is always something impressive in the result of vast labour, much as there is in the sight of some great multitude. We seem to realise in such cases some of the thoughts and trials of others; our own ideas appear small and petty in presence of grandeur; and there is, moreover, the small still voice ever whispering in our ear, that 'all is vanity.' The old stones crumble, the walls totter and fall, change passes upon everything. Myriads of men have passed away, and still, from generation to generation, the great problems of humanity remain the same, unsolved, if not insoluble. The great castles are thus, like the Egyptian pyramids, emblems of the power of man over matter, although, so far as they display beauty of art, they add something to the simple illustration of this principle. Heaps of stones are nothing; although when piled up, as we see them on the banks of the Nile, they are perhaps the most conspicuous symbols possible of brute force and despotic authority.

The castle as an architectural work of defence.

Castles, however, differ from the Pyramids, in that they were built for use, and needed for security. They were required to be defensible, not only against the tumultuous attacks of an ill-armed peasantry, but also against engines

of war. These formidable contrivances, dating often, in principle, from great antiquity, were daily becoming more powerful and complicated. The story of mankind is, indeed, one long history of strife, of the study of the attack and the defence; from the poisoned arrow of the naked savage, to the last development of our ironclad ships and forts, our mysterious torpedoes, and our 'Woolwich infants.'

Accordingly, before passing on to the more domestic structures of mediæval times, it may be well to dwell, for a time, on this phase of constructional art. It is not the less interesting to do so, because we may assume that this class of work has now passed definitely from the control of the architect. Not only are the days of portcullises and battlements gone from us, but even stone buildings are no longer trusted. Naval artillerymen expect to be protected by iron, almost as thick as the old stone walls, and armies buried in earthen trenches deal death and destruction to their foes at enormous distances with arms of precision. If the quarrels of the great lords of old were savage and frequent, it may, perhaps, be asked what improvement can we boast of, when the victims of a war are reckoned by hundreds of thousands, not of combatants alone? Our business to-night, however, is not with the wars, but with the structures of the Normans, and to them we will return.

The castle architecture everywhere the same.

To the Normans we owe many fine works of art in our cathedrals, as at Peterborough, Durham, Canterbury, and many other places. They brought with them to their new possessions wealth, knowledge, and skill; for much of the ornamental portions at least of these buildings must have been executed by foreign workmen. Exercising the rights of conquest, they added to their riches by exactions and confiscations, and thus became able to command the labour of thousands. Beginning with imitations of forms familiar to them at home, their architects, being cut off from Continental associations, soon developed a character of their own, and introduced special forms and features, which distinguish the Norman style as naturalised in England. These novelties were, however, reserved for the great churches, and scarcely apply to the castles, which we are now considering, and

which, as is usual with military buildings, followed pretty strictly the rules of precedent.

(II.) Influence of Roman traditions upon it.

(II.) The walls of Pompeii still furnish a good example of the Roman method of constructing the fortified *enceinte* of towns and fortresses. This formed a precedent long followed in succeeding times. Projecting towers and bastions were also based upon plans of Roman fortifications. The embattled and protected walls enclosed an area of ground, often considerable, which was commanded, in its turn, by the castle or keep, towering above the walls, and protecting them. This was the castellum, the castle, the château, of various ages and different tongues.

The superiority of defence over attack.

These arrangements were adopted in principle in most strong places, and were found sufficient to secure safety for the inmates. If a battering-ram were made stronger, the walls were increased in thickness or their shape improved, and the art of defence prospered. It was not, indeed, until gunpowder was invented that this state of things began to be called in question. In the twelfth century, and for long afterwards, the attack was almost hopeless as a direct means of capture. With the use of artillery, the case became reversed, and from that time to the present the fight between guns and armour has continued, with apparently varying shades of success, but with a steady advance in the power of attack, so that, as regards sieges, it has even become a military proverb, that 'a place attacked, is a place taken.'

This was very far from being the case in the Middle Ages, and the Mediæval castles abound with contrivances for so isolating portions of the work, that even in case of partial disaster or treachery, the garrison might retreat from point to point, and continue the defence. The towers were thus often separate fortresses, supplied with ovens, water, and necessaries of life. They were, moreover, so designed as to be formidable to the besieged, as well as to the besiegers. In cases of towns, it often happened that the citizens had little interest in the defence, and less appetite for the horrors of war. The fortifications were held, it might well be, by some robber baron, interested only in plunder, and regarding rich burghers as a shepherd regards sheep to be shorn. The latter were, therefore, kept at a distance, and not allowed

access to the defensive works of turret, bastion, or battlements. This necessitated the long-walled passages and staircases of communication, which are to be traced in many ruined castles. In some cases such passages led to an adjoining stream or river, and communicated with ferries or bridges.

The fortified bridge.

It was often a great object to command navigable streams, such, for example, as the Rhine, on the banks of which the remains of castles meet us at every turn. The trade of such watery highways was naturally at the mercy of the lords of these strong places, who were thus enabled to impose tolls, and fill their coffers. The Rhine and other rivers of great magnitude could not be bridged, and could not therefore fall into the absolute power of a single master. In cases, however, where bridges were possible, it was customary to make such structures an integral portion of the work of fortification. Their parapets were embattled, the spaces over the piers became bastions of defence, and towers flanked the bridge at each end. Some of you may remember the quaint and effective battlements still to be seen on the bridge at Pesth, and also at Verona, which, though, of course, later in date than Norman times, have handed down to us the precedents of earlier days.

The *tête-de-pont.*

When the castle or fortified town had thrown its bridge across the stream, it was evident that the end of the bridge farthest from the works was a vulnerable point, and, as such, was likely to be seriously attacked by an enemy. It was therefore defended by a fortification of its own, which became known as the *tête-de-pont.* Sometimes this was a tower only, but in other cases it became an important work, with turrets and connecting walls, forming, in fact, a fortress in itself, and a strong outwork to the castle or city. In process of time, the *têtes-de-pont* often included whole suburbs, as you may trace in many modernised cities at the present day, such as Dresden, Cologne, or Mayence.

The general design or plan of the fortifications was dictated principally by the form of the site, and was, therefore, as a rule, irregular. A commanding position was selected, and in cases where the building was placed on low

ground, for local reasons (such as from the wish to command a stream or river), care was taken to obtain control where possible of any neighbouring hill, or eminence, and walls were even carried over it in many cases.

The keep.

Although the general shape of the whole work might be irregular, the heart or kernel of the whole, which we call the keep or donjon, was for the most part regular on plan, and designed on certain accepted principles, which were varied from time to time. It was of course necessary that this all-important work should possess great strength and power of resistance; and it is here, therefore, that we expect to find the best evidence of the technical skill of the day. The *enceinte* might be forced, but even then the keep would remain as a last retreat to the beleaguered garrison. The earliest form appears to have been a square or rectangle, strengthened by turrets and buttresses, as you may see at the Tower of London. The interior was divided into stories, which contained stores of food, ovens, wells, and the inevitable dungeon. The rooms were sometimes vaulted with stone, and in other cases the floors were carried on massive wooden beams, resting on stone piers and corbels.

Rectangular or curved plan.

The keep was the fortress proper, and commanded everything. It was placed on high ground, and access to it was commonly restricted to a narrow doorway, placed some feet above the ground, or approached by ladders or steps, which could easily be removed by the garrison. At the time of the Norman conquest of England, the rule appears to have been to make the buildings rectangular; but a change was gradually beginning, and soon it became customary to adopt curved forms, so that by the middle of the twelfth century the square and rectangular plan was mostly abandoned. We then find a series of curves, either used alone, or in combination with straight walls and rectangular turrets. It was found that the angles of the old square keeps were the most vulnerable points, and were susceptible of attack by mining, and otherwise. The object of the military architect was therefore to avoid such angles as much as possible, and to present to the enemy, instead of them, curved forms of equal strength in all their parts. Towards the close of the twelfth century this idea seems to have been for the

first time carried to its logical result, and we then find keeps of a complete circular plan.

The donjon of Coucy.

(III.) One of the most celebrated examples of this mode of work is to be found in the castle of Coucy, on the north-eastern frontier of France, which has been described and illustrated by M. Viollet-le-Duc. The donjon was erected, it is believed, about the year 1220, and the circular towers, or turrets, at the same time. Portions of the entrance gateway, and the great halls, were rebuilt early in the fifteenth century. The entrance was protected by a moat, over which a bridge led to the gate of the castle. The bridge was not a permanent structure, but was built with a wooden gangway resting on piers, so that it could be removed in case of a siege.

Although, as you will have noticed, the date of Coucy is later than that of the Norman castles in England, it will, I think, be interesting to examine it, as presenting to us an example of the extent to which architectural art came, in process of time, to be applied to such utilitarian structures as fortresses. In earlier days, nothing of the kind was attempted. Even mouldings were almost unknown, and no sculpture, save perhaps an occasional heraldic device, was to be seen; while, on the other hand, every attention was given to the strength of the walls, and to the quality of the masonry. Here at Coucy, we find that we have been led up to a work of importance, as a specimen of architecture. It is not only an engineering achievement, but also a work of architectural art.

Union of scientific construction with artistic effect.

We may, perhaps, recall in passing, how we have advanced to this combination. The square plan was abandoned in favour of curves for purely scientific reasons. Similar causes led to the adoption of the circular form, and we thus arrive at an ultimate result, dictated altogether by utilitarian considerations. In this case, however, they have not led to ugliness, but to the reverse; and from that circumstance we may perhaps find something to reflect upon. We know but too well how matters with us seem almost naturally to drift into uginess, so that artists have reason to dread the very name of utilitarianism and science. We have seen our wooden walls,—the dashing frigates and

splendid line-of-battle ships, with which Nelson met a world in arms,—at last driven from the seas, not by enemies, such as they have always conquered and never feared, but by the quiet and irresistible advance of science. In the place of objects which every artist loved to draw, we have now huge monsters, gaunt and mastless, moved by steam, and governed by means of electricity, and while we can only hope they are safe, we know only too well that they are hideous. May we not cling to the idea that there is something wanting here, which may yet be supplied by a future development of artistic instinct? and that as the architects of Coucy worked hand-in-hand with science, as far as it had then advanced, a similar course on our part need not necessarily lead to an utter negation of art?

The isolated castle.

The château of Coucy is interesting, moreover, as occupying an intermediate rank between the great castles of the country and the citadels of the towns. In the former case we find, as I have already pointed out, large areas of land inclosed by defensive works. To them an army could retreat, and considerable internal space within the walls was therefore indispensable. There must not only be the keep or castle proper, but extensive buildings were further needed as barracks for the soldiers, storehouses, and the like. If there was a town near to such a stronghold, it might be connected by intermediate works, and care would be taken to command it from the towers. High roads and streams would be, as far as possible, brought under the control of the garrison. Such castles as these possessed, as a matter of course, high political importance, and could not be safely neglected by any army of invasion, as from them expeditions could sally forth at will to intercept the communications of their enemy. It was necessary, therefore, for the latter to resort to a siege, and this was, as we have seen, a very slow, and not very hopeful, process in the Middle Ages.

The citadel.

The other class of fortresses, or town citadels, include those which were constructed to defend or overawe a city or village, to control a river, or to provide a refuge for small bodies of men, the retinue of some bold chief or baron. They often formed part of the city itself, so that their defences were necessarily influenced by the situation and

peculiarities of the latter, and were thus frequently connected with the city walls, which were incorporated into the system of defensive works. In such cases the castle became a citadel, a place of refuge in case of siege, which might be held by a small band of resolute men, after the town beneath had surrendered, or had been taken by assault. The town was indeed an item of the whole scheme of fortifications, and the castle the heart of the whole.

The castle of Coucy a link between the two.

These two descriptions apply to the two broad distinctions of Mediæval castles; but between them there are of course many varieties, and the castle of Coucy may be looked upon as a connecting link. Here the town is so far connected with the castle, that it forms a part of the whole fortification. On the other hand, the castle, with its donjon or keep, is complete in itself, and isolated from the city by wide spaces, a gateway, and defences. Although available for defending the town, the castle is independent, and can stand alone. The whole space inclosed by the walls is of the usual irregular character, in accordance with the peculiarities of the ground; but the citadel is, as we have seen, of the severely regular form which the scientific military engineering of the day prescribed.

The Place d'Armes.

To pass to the castle from the town, it was necessary first to force the gateway and its lateral defences. This done, the large open space, or Place d'Armes, would have to be traversed, fully exposed, as it was, to the missiles of the castle, showered with full force from an elevated position. If we suppose these difficulties surmounted by the besiegers, they would yet have to pass the great moat which separates the Place d'Armes from the works of the castle, and not until success had crowned their successive efforts, could they even approach the great donjon, the key to the whole stronghold.

The donjon.

Occupying the highest ground, this great work commanded the town, the Place d'Armes, the castle itself, with its outbuildings of all kinds, and the backs of the outer lines of fortifications. Completely circular on plan, having an external diameter of some 115 feet, and being upwards of 200 feet high, it presented equal defensive strength on every side. It was also surrounded by a ditch, with a drawbridge,

in connection with the entrance, which was at some distance from the ground, and strongly defended. The interior was divided into three stories, each nearly 75 feet in height, and beautifully vaulted in stone, the arches being acutely pointed. The walls were of great strength, those of the lower story being some 30 feet thick.

Lowest story.

The walls of the lowest story were almost solid, the only apertures being the entrance before alluded to, and a few narrow slits of windows, at a great height from the ground. Here was a deep well, and space for storage of food and munitions of war. A winding staircase led to the upper stories, and some other accommodation was also provided in the thickness of the wall, near to the sally-port.

Passing upwards, we find the middle story, with a very similar apartment, about 50 feet in diameter, but here there was a fireplace, and we may conclude that it was the chief dwelling apartment. There are several windows, and, in the case of one of them, there is a chamber, or private entrance to a passage, communicating with a small sally-port, distinct from the chief entrance. This sally-port being at a great height from the ground, would give access by means of a drawbridge to the backs of the parapets of the surrounding walls, so that the soldiers in the donjon could at any time pass on to the other and lower defences of the castle. The sally-port being small, and thus placed, did not call for special defensive works, such as those to be found at the principal entrances, which consisted of iron railings, two doors, and a portcullis.

The whole space within the walls is occupied by the great vaulted room, but there is also a second small private chamber, probably for the lord of the castle, cleverly constructed in the thickness of the wall. The windows are few and small, and apertures were evidently grudged by the architects. Ventilation was probably obtained by leaving the central ring or eye of the groining open, an arrangement obviously convenient also for hoisting goods and projectiles from the lower stories to the battlements. These apertures, being exactly over each other, would also admit light, as well as promote ventilation, and it may be remarked that the amount of light which can be admitted in this manner

is very great. It is, in fact, the mode adopted by the builders of the Pantheon at Rome, and few who have seen the striking interior of that building can have failed to notice, probably with some surprise, the satisfactory quality, and abundant quantity, of illumination obtained from a small area of opening in the very centre of the semicircular dome.

The arches of the vaulting at Coucy have fallen, or have been destroyed; but enough remains in the springing-courses, corbels, and other architectural details, to show that the work was of fine character and pure design, and the capitals in particular were well carved and moulded. It will be perceived, from the illustrations, that the whole work presented a striking architectural character, somewhat at variance with our preconceived ideas of the severity and sternness of castle-building. The ground-floor is remarkable from its solid and monumental character, well befitting its position. The intermediate hall being lighter and more spacious, has an especial fitness for its intention, as a chief place of habitation; while the third story has a character quite different from the others, and deserving some special notice.

Third story.

This story consists of only one room, with a vaulted and groined roof like those below; but at this point the designers evidently considered that it was no longer necessary to maintain the walls of the strength and thickness which they had adopted for the lower stories. Retaining, therefore, the same width of chamber as before, between the piers of the vault, they have formed great recesses in the outside walls, and have connected the recesses by arched openings. By this means they have obtained a spacious gallery surrounding the entire chamber, constructed in the thickness of the wall. This arrangement is of clever and ingenious construction, and is, moreover, very effective architecturally. The galleries are built in solid masonry, but there are not wanting indications that wooden supports, carried from pier to pier, were employed to project the gallery-fronts as far as the columnar piers of the groining. With these subsidiary features, the galleries formed a striking addition, not only to the architectural effect, but also to the size of the room, and the accommodation which it afforded. It might have

been used for the place of assembly of a numerous garrison, as it could hold, for this purpose, some 1,200 men.

It is to be noticed, in examining the construction of this story, that the piers and arches are carefully arranged, on the soundest principles. The piers are placed in the direct line of resistance to the thrust of the arches of the groined roof; and although the recesses are large, full advantage is taken of the thickness of the walls to obtain piers of the best shape to resist lateral pressure. The whole building is a conspicuous example of success, obtained by the architect, working hand-in-hand with the military engineer, being indeed, in all probability, one and the same person.

Roof.

Passing upwards from this handsome and interesting hall, by the winding staircase which gives access to each story in turn, we come to the roof, surrounded by a continuous wall pierced with openings, which served the purpose of embrasures. The space above the groining is covered with flags, which may have been further protected, wholly or in part, by lead. There is a considerable fall outwards, to enable the water to flow off readily, through apertures specially provided for it. At this level, there are massive corbels built into the walls on the outside, and projecting outwards, on which it is supposed timber work may have rested.

Such was the donjon of Coucy, a monument of defensive architecture, of almost gigantic proportions, and rivalling the works of the ancient Romans in the grandeur of its conception and the massiveness of its execution.

It was an embodiment in stone of the power and pride of its owners. Their heraldic device was sculptured over the door, and represented a combat between a man and a lion. To be lion-hearted was an appropriate boast of the Barons of Coucy, who delighted in their proud motto,—

> Roi, je ne suis,
> Prince, ni Comte aussi,
> Je suis le Sire de Coucy.

Walls and smaller towers.

We have seen how the square turrets were gradually modified, and gave place to circular forms, and how a combination of curves became ultimately merged in one great circular plan, as at Coucy. This form, however, was only

applicable to the donjon, and the walls of *enceinte* were still irregular in form. They therefore, necessarily, continued to be defended in the old way, by towers, which were built, as before, of the circular plan.

Château Gaillard.

(IV.) At Château Gaillard, on the Seine, the inner line of defence is composed of a series of curves, which almost join one another, and form a wall of very great strength. This arrangement is, however, peculiar, and as Château Gaillard was the favourite work of our King Richard I., and as he is known to have devoted great personal attention to the design, it has been supposed that the special features found in this great work, and which are not to be traced elsewhere, were due to the personal views and orders of the 'lion-hearted' monarch, and possibly derived from his Eastern experience.

Modifications of circular form for military reasons.

In other cases, the circular turret was still employed, with a greater or less length of curtain or straight wall between the turrets. It became evident, however, as the power of attack increased, that such curtains needed more protection, and the obvious method of affording it was to multiply the towers. As, however, this was very costly, and not always easy to achieve for local reasons, an alternative suggested itself by advancing the towers, and thus obtaining a greater lateral command of the curtains. To project the towers, however, unduly, would weaken the whole work, and to increase their diameter led to expense and inconvenience. A modification of the circular form was consequently arrived at by the addition of a projection on the outer face, which thus finished with an angle. The circular form was still unchanged within, but the outer portion of the turret assumed, on plan, the shape of an acutely pointed arch, which we may term a horn or beak.

It will readily be perceived that the adoption of this form secured important advantages. Not only did it give to the defenders a better range for the defence of the curtains, but it strengthened the walls of the tower at the point where attack was most to be expected, and, moreover, tended to keep assailants further from the walls, and consequently in positions more exposed to converging fire.

To succeed in the attack in those days was impossible without coming to close quarters, and every difficulty thrown

in the way of the approach was an important gain to the defence. The projecting angle, or horn, arose therefore naturally from scientific considerations and the proved exigencies of the case, and the principle was capable of further development. We thus find the horn assuming gradually a more elongated shape, and the towers projecting more and more from the walls, till they become oblong on plan, with curved and pointed ends, the latter being sometimes built of an angular shape, with straight sides.

Care bestowed on castle architecture.

It is evident that in the construction of important places, the science of defence was thoroughly studied and brought to great perfection, and the reason is not far to seek. Such works were the natural outcome of the feudal system, in which each great lord was a petty monarch, with his court and policy, his army and dependents, owing him obedience and fealty, and not looking beyond him. Each feudal chieftain had, therefore, the perils, as well as the pleasures, of independence. He had to look to his own safety, so that no one should make him afraid. He needed to be able to assemble his vassals, and defend them in case of need. His ambition might even lead him to refuse that service to his feudal superior, which he exacted rigidly from his own people. He was, in fact, the strong man armed, and armed against the world, against friends who might become foes; against the foreigner as well as the neighbour; sometimes against his superiors, and often against his own people. It was not the day of great armies, but rather of small bands of hardy men, trained to arms from their youth. With them the lord and his family lived in the great castle, and, when necessity arose for further aid, it was met by hiring bands of roving adventurers, who made war their trade, and sold their services to the highest bidder.

It is necessary to bear these circumstances in mind in order to understand the full importance that was attached to perfecting the defensive works of such fortresses as that of Coucy, and also to appreciate the architectural skill which was brought to bear on its internal details. In the chapels, refectories, halls, and other out-buildings, the beauty of architecture is often very great, though generally of a later date than the castle itself. It is, however, of the latter that

we are now treating, as the former buildings, while following the variations of styles, in the same manner as other architecture of the period, have not the peculiarities of construction which mark out the castles proper as objects for especial notice in connection with the subject before us.

Decay of the importance of castles.

The defences of such buildings became stronger and stronger. Towers were multiplied, drawbridges added, and machicolations permanently constructed of stone, when suddenly there appeared upon the scene a power which was destined to revolutionise the art of war. I allude, of course, to the invention of gunpowder, and the use of artillery. The feudal system was essentially one of individual prowess, and yielded slowly and reluctantly to a rival which sought for strength in combination, and mowed down knights and serving men in a common destruction.

Preservation of ancient forms in later French château.

It was evident to the thoughtful inquirer that the days of lofty castles, with their commanding walls and towers, were numbered, and that they could not brave a power which, by breaching the weakest part, turned their strength into feebleness. But men are slow to change, and the old forms long continued, till they merged at last into the picturesque battlements and turrets of purely civil architecture. France was especially the country for fortresses, and we find, consequently, that the influence of military traditions on civil work in that country is more marked than is the case in England. The French châteaux are illustrations of the transition from the Mediæval fortification to the palatial residence. We have there the comfort of adequate internal arrangements, while outside there is still the gateway with its flanking turrets, as at Chaumont; the bridge, as at Chenonceaux; the moats, parapets, and towers, of Azay-le-Rideau, and other examples. The circular turrets, with their extinguisher-like roofs, have indeed come to be recognised as a distinguishing feature of French domestic architecture.

Different experience of England.

In England the case was different. Our castles were, in the first place, less numerous, and less important. The state of public affairs was less unsettled, and our insular position was then, as now, our chief protection. The fortresses were, more frequently, strongholds of the king, as trustee for the

nation: and in cases where they were erected by private persons they owed their existence, for the most part, to special circumstances, such as the temporarily unsettled state of frontier counties—as, for example, those which formed the border land between England and Scotland, or England and Wales. The round towers of Ireland, and the sea-coast fortifications, had also, in the same way, only a local importance. We do not, therefore, trace in English domestic architecture, subsequently to the Norman and castle-building period, anything like the same military influence that we see in France. The battlements of our Mediæval houses soon became merely ornamental details, and the turreted gateways a sign only of architectural magnificence. The moats became gardens, and chimneys took the place of turrets. The castle of the Norman lord had given place to the hall or manor-house of the English nobleman and squire.

Methods of attack and defence.

(V.) Here we may leave this part of our subject for the present, while, before concluding, I say a few words about the modes of attack which were practised against Mediæval fortresses, and to resist which they were especially and, as we have seen, carefully and scientifically designed. In so doing, I shall also call your attention to the methods which were employed by the besieged to supplement their permanent work by additional defences of timber, which either formed a part of the regular structure, or were erected to cope with a temporary emergency, and were afterwards removed. This question has been carefully studied by M. Viollet-le-Duc, and we may profitably consider his suggestions on the subject.

Attack.

In dealing with the architectural forms of castles, we have naturally concentrated our attention on the defence. We have seen, however, how such forms became varied, in consequence of experience, and how increased power of attack was met by a more than corresponding addition to defensive strength. It therefore becomes desirable to notice, briefly, how the attack was carried on, and to what structural forms the necessities of defence gave rise. Space would fail us to pursue the subject beyond the invention of gunpowder. The changes caused by this great revolution, indeed, soon took

the fortress out of the hands of the architect altogether, and we have, therefore, no further concern with it here. We shall consequently have to refer only to the old and primitive modes of warfare; which, handed down from the times of the Romans, were perfected more or less by our Mediæval forefathers, and were used against such structures as we have left to us at Coucy and elsewhere.

The battering-ram and tower.

First of all, we come to the battering-ram, an engine familiar to all readers of history, and needing no description. It was necessary to place the ram near the walls, and hence the necessity for towers of defence. Such defensive works were attacked by other towers, constructed under shelter by the besiegers, and then moved by them to situations opposite to the chosen points of attack. These towers of offence required to be higher than the battlements of the fortress, so that the attacking force might descend upon the latter by means of bridges and movable platforms, in such a manner as to overpower the defenders by weight and numbers. In order to provide a suitable foundation for the erection of the battering-ram, or the tower, it was necessary to approach the walls. This was done by trenches, protected and covered by timber. To resist fire, raw hides were used over the timber, and under this protection, the besiegers advanced, and could mine or injure the walls.

The 'cat.'

In cases where the above-named method of attack was not applicable, as, for example, where a moat existed, an instrument known as the 'cat' was employed. This was an oblong covered shed, constructed of timber, and protected against fire by hides, as before described. The cat was built on a platform, which was pushed forward on rollers, and from an opening in front fascines and other matters were thrown into the ditches and moat, as the advance took place. Arrived at last at the foot of the wall, the men inside the cat could work, undisturbed, at their mining and offensive operations. In the meantime, their comrades were not idle, but shot down the defenders, when possible, by means of bows and crossbows, while for more serious operations the catapult of the Romans was still employed. The bow-men were protected by sloping shields, and fired through loop-holes left for the purpose.

The tower drawbridge.

The wooden towers before mentioned were constructed and moved forward, in the same way as the cat, with long timbers, ropes, and pulleys. They were, of necessity, very strongly constructed, and could contain a large number of men. As the tower gradually advanced, the moat was filled by materials thrown from the tower, and thus a way was prepared to the foot of the walls. When the distance was thus reduced, the tower was slightly inclined, and thus rushed forward, or fell of its own weight against the top of the wall, and the upper part of the face of the tower being suddenly lowered, as a drawbridge, the assailants rushed forward, to be followed by streams of reinforcements, advancing through the tower as by a ladder.

This was the turning-point of the siege, and the defenders, if overpowered, must either surrender, or retreat, as was generally the case, from turret to turret, till they reached the donjon, or keep, which, as we have already seen, was often complete in itself, requiring a regular siege, and well-nigh impregnable.

Defence.

Before yielding, therefore, the besieged had many resources. Their walls were too high to admit of being scaled; they were too strong to yield to the labours of the miner, unless these latter were strenuous and long-continued. But the defenders behind the parapets laboured under one difficulty of a serious nature, in that they were unable to command the foot of the walls, without exposing themselves to be shot. Embrasures were made with sloping cills, but no slope could be constructed of sufficient steepness to overcome this disadvantage. Supplementary defences were therefore devised, in the form of wooden structures, superimposed on the solid walls, and projecting beyond them. These structures have been called hoards.

The 'hoards.'

The object of the hoards was to enable the men on the top of the walls to command the whole outer face, and to be able to drop missiles on the heads of the enemies and assailants below. The hoards, in early examples, were supported on strong wooden beams, pushed from the inside through holes left for the purpose in the walls. These beams projected outwards, as corbels, and on these corbels wooden galleries were built, and in some cases covered with roofs.

Traces of such timber hoards may be found in buildings of as early a date as the twelfth century, and they continued to be employed until the fourteenth century, when they were, for the most part, laid aside for the more solid constructions of stone, which we find forming overhanging balconies, cornices, and galleries. These were supported on boldly moulded corbels of stone, 3 feet or 4 feet apart, and apertures were left in the floor, between the corbels, for the use of the defence. The effect of these projections was considerable in an architectural sense, and gave an air of finish and completeness to the structure, as may be seen at Pierrefonds and at other places. They had an enduring influence in the forms of subsequent styles, and long survived in England in overhanging cornices and battlements of the gate towers and turrets of Tudor and Elizabethan days.

Overhanging galleries.

Between the times of the use of timber beam corbels and those of masonry there was a considerable interval, and during this period of transition a combination of the two systems was adopted. To masons so well skilled as the builders of the Norman castles, the change from wooden to stone corbels would readily suggest itself, although the cost, and the weight of permanent stone galleries, walls, and embrasures, might not as yet be willingly faced. Accordingly, we find, as at Coucy, examples of permanent stone corbels, without any superstructure, but obviously intended to support, in case of need, timber gangways, or galleries. The corbels are built into the solid walls, and upon them the additional defences required could be readily erected, in case of need.

Combinations of both.

It is now time to conclude this description of the methods of design and construction used by the military architects of the Middle Ages, and particularly by the Normans. It was in their own country that their art was carried by them to the highest pitch of development, but we may trace its influence in many remains of English castles. In the Tower of London we have a specimen of the square or rectangular keep, with flanking turrets, also rectangular on plan. Rochester and Norwich furnish us also with interesting examples, and in the well-known Round Tower of Windsor we have a modern imitation of the all but circular form,

English examples of the Norman castle.

grand in its simplicity, which superseded the squares and partial curves of earlier times.

Lessons to be derived from the study.

It will have been noticed how distinctly the style of design adopted for these structures stands out from that of ecclesiastical buildings. It is, in fact, a military style, with some affinity for Domestic work, and it is interesting to us as showing, among other things, how possible it may be to develop architectural character from scientific requirements. Nothing could be more prosaic and commonplace than the demands of soldiers for the defence of their fortresses. Nevertheless, we find these demands complied with, in the very spirit of common sense, which is, nevertheless, able to snatch a beauty from art. It is, consequently, impossible for us to study the works of this remarkable age without a strong feeling of admiration for the skill of its architects, and without a conviction that, if artistic considerations were properly regarded in our own days, perfect utility need not, and should not, be inconsistent with architectural beauty, nor scientific devotion necessarily opposed to æsthetic culture.

LECTURE II.[1]

DOMESTIC ARCHITECTURE, TWELFTH CENTURY.

Roman domestic architecture as seen at Pompeii.

FOR the study of the domestic architecture of the ancients, their hearths and homes, and the details of their every-day life, there exist abundant materials, open to every observer, in the ruins of Pompeii and Herculaneum. We see there how the Romans followed Greek precedents, although with important differences introduced by themselves, both in ornamentation and construction. Pompeii was indeed almost a Grecian city, having been originally founded by colonists from Greece. This peculiar circumstance does not, however, wholly account for the prevalence of Greek traditions to be seen in the ruined cities: for the plan of the houses there adopted was common with the Romans in every part of their extended empire, and was not without influence, as we may hereafter have occasion to recognise, in the far-away land of the then savage Britons.

Its examples in England.

When we come upon the traces of Roman work in these islands, we find that the proud conquerors of the world, in crossing the seas and changing their sky, had not lost that spirit of allegiance to the customs of Imperial Rome which distinguished all their life, whether public or private. Here, at the extremity of their vast organisation, the pulse may have beaten feebly, but it was in unison, nevertheless, with the stronger impulses of Rome itself. We seem, indeed, while noting the slender architectural remains of Roman work, now and again discovered amongst us, to witness the last expiring efforts of that wonderful civilisation which could do much, but not all; which could inculcate the

[1] Delivered March 5, 1877. In this and the succeeding lectures the lecturer was deeply indebted to Parker's *Domestic Architecture*, and the lecture were largely illustrated from that work.

virtues of the patriot and the citizen, but which left it to the vivifying influence of a purer faith to bring out the duty of man to man, with all its far-reaching consequences.

The later Roman did not adopt forms from his conquered enemies. He rather imposed his own upon them; and, this not only in regard to details, but also as to principles of design. He followed Greece indeed; but he added ideas of his own, and had imperfect sympathy with the beautiful execution and the fastidious delicacy of refinement in which the Greek architects delighted. With the semicircular arch came the frequent use of curved and circular forms in the plans and sections of buildings. Thus, the Basilicas, as you are aware, had frequently semicircular ends, or apses, which proved the forerunners of the choirs and chancels of Christian churches. In the splendid ruin at Rome, known as the Temple of Peace, you further see in its curved and vaulted roofs the application of the arch to the transverse sections of such buildings. The perfection of the application of this principle was, of course, the dome, the crowning glory of Classic architecture. The Romans, while starting from Greek art, added to its forms, changed its decoration, and, while gaining freedom, lost in purity of taste. The use of the arch enabled them to exercise greater boldness in construction, and the massive ruins of their baths, aqueducts, and public works have justly excited the admiration of succeeding ages.

The decay of Roman architecture was sudden and complete; and when we take leave of Pompeii, and of the tawdry finery of the debased and falling empire, we come upon a period of pause and interregnum, out of which issued the glories of Mediæval art.

Its effect on subsequent domestic architecture.

In prosecuting our inquiries into Mediæval art, and comparing it with its Roman precursor, it is interesting to trace in the remains of Pompeii principles of design and arrangement which we shall come upon elsewhere in our investigations of the architectural works of the Goths. Thus, the atrium, the distinguishing feature of the Roman house, foreshadowed, in some respects, the hall of northern climes. Here, as in a public place, the Roman Patrician received his dependents, and transacted business. Around it were

grouped the cubicula, or separate bedrooms, the private apartments, and the women's chambers—an arrangement far in advance of the domestic provisions of the Saxons and Normans in this country. Although, in the later days of the Roman Empire, corruption of manners had led to profusion and extravagance, the Roman gentleman had, at least, inherited maxims of moderation and frugality, and his domestic arrangements give no indication of the rough and profuse hospitality which prevailed in Mediæval times. The atrium might serve many of the same purposes as a Gothic hall; but the modest dining-room of a Roman house, with its triclinia for a few friends or members of the family, bore no resemblance to the Gothic banqueting-room, with its roaring fire, its wassail bowls, and its miscellaneous assemblage of roysterers. He had, moreover, no reason to surround himself with walls and battlements, or to keep bands of armed retainers in his train. A free citizen of a free country, he reaped the advantages of a settled government and well-ordered system of public affairs, in which it was his right to take part.

The domestic architecture of the Middle Ages.

Starting, however, from the works of the Greeks and Romans, we shall confine our attention to our own country, and endeavour to trace the various steps which were taken by our forefathers to provide themselves with handsome and comfortable dwellings. This inquiry is not unattended with difficulty. Mr. Parker, in his admirable works on domestic architecture, has brought together a mass of valuable information, of which I shall gladly avail myself; but we cannot expect to find as many materials for our present purpose as those which exist so richly around us, in connection with ecclesiastical architecture. The study of domestic architecture has, however, a special interest in these days, when the spread of manufactures has led to the aggregation of multitudes in our great towns and hives of industry. We recognise, as one of the chief problems of our time, the urgent necessity of providing healthy homes for the people. Can nothing be done to bring to bear upon these the light of beauty and art? This is the difficulty with which artists have to contend, and, though we cannot get from our predecessors any absolute instruction on the subject, we may, at

least, endeavour to profit by their experience, to study the principles on which they worked, and to consider whether these may not serve as lights to our own path.

The Roman house in England.

We find with some surprise that the Roman dwellings in England did not materially differ from those in Italy. These, again, were almost copied, as we have seen, from Greek plans, suitable only for a hot and dry climate. Even in Italy such an imitation must have led to inconveniences, and it is difficult to imagine anything more uncomfortable in a northern climate, than a Greco-Roman house, transplanted from the banks of the Ilyssus or the Tiber. Take, for example, that important part of it, the atrium, to which I have just referred. This was open, as a rule, though often temporarily protected, and sometimes, but rarely, crowned with a permanent roof. Necessity must have prescribed the latter arrangement for dwellings in this country; but, in other respects, the distribution of parts, which the Romans had reduced to a system, was the same here as in other parts of their empire. The atrium, when covered in, and lighted by a clearstory, or by windows, may be regarded as the type of the hall, which became a feature in all considerable buildings in Mediæval times. The Gothic architects at first adopted the simplicity of construction in their works generally which was a characteristic of Roman work. With a freer use of the arch came, later on, a boldness of construction which the Romans never approached, a freedom which was, indeed, sometimes indulged in at the cost of solidity.

Its invariable solidity.

Wherever we find traces of Roman modes of building, in this country, they are of a substantial character. The plentiful use of mortar, often in combination with pebbles and small bricks as concrete, deserves special notice, as being the forerunner of a system of building now much used by engineers in those vast works entrusted to them, which may rival the colossal achievements of the Romans themselves. The Romans obviously had great confidence in their mortar and concrete; they did not practise the art of moulding brickwork, and employed bricks, or rather tiles, but seldom in any great architectural work. The Roman brick, as we term it, is more like a paving tile than a brick, and is not more than an inch, or an inch and a half, in thickness.

You will find it in most Roman works, and in a great many Anglo-Saxon and Norman examples erected during the eleventh and twelfth centuries. The materials used were much the same as at present, with the exception, of course, of what I may call the engineering development of iron, which it has been reserved for us to witness. Apart from this addition, the science of building has scarcely advanced from the days of the Ptolemies, and the modern builders have little to boast of.

The Saxon house borrowed from the Romans.

After the departure of the Romans, the Saxon invaders of Britain would naturally make the best they could of the buildings of which they became the possessors. With some modifications, therefore, the Roman houses, which then existed, became their dwellings. As repairs were needed, changes arose; the old houses would be altered or pulled down, and their more solid materials used elsewhere, a circumstance which often explains the presence of what we call Roman materials in buildings of a later date. At a time when roads scarcely existed, the carriage of heavy articles must have been very costly and difficult, and our forefathers had, therefore, very good reasons for treating the Roman works about them as quarries. It was thus that the original structure of the church and abbey of St. Alban was built from the remains of the ancient city of Verulamium. The private houses were less fortunate. For them the expense of durable materials was too great, and the people had to live in huts of wood or mud, covered with reeds, thatch, or shingle. In Saxon days there was little comfort or safety in single dwellings, and the common people were the 'hearth-men' of their lords, or thanes, around whom they clustered, and with whom they lived. The thane lived in a semi-patriarchal state, and not only shared his table with his dependents, but even his sleeping-apartment. The hall, from its importance in the dwelling, gave the name to the whole structure. It was the direct successor of the covered Roman atrium, and, like it, was the central feature of the house. In it the lord and his dependents took their meals by day and their sleep by night. The master had, indeed, sometimes an apartment of his own, but even this was often shared by him with his principal retainers. Chim-

neys there were none, and, when there was a fire, it was lighted in the middle of the hall, and the smoke was left to find its way through a hole in the roof, or by other openings, as best it could.

Its early simplicity.

It was by slow degrees that these simple arrangements were improved. Houses were used for protection from the weather—not as *homes* in anything like our sense of the word. They had but to satisfy the simple requirements of a rough and hardy population, living much out of doors, and given to war and sports. Rowing, swimming, archery, hunting, wrestling, and such like pastimes were common, and we have recorded, in one case, the following boast of a Saxon thane, named Kolson. 'I know,' he says, 'how to play at chess; I can engrave Runic letters; I am expert at my book; I know how to handle the tools of the smith; I can traverse the snow in skates of wood; I excel in shooting with the bow; I use the oar with facility; I can sing to the harp; and I compose verses.' It is not to be supposed, indeed, that such a list of accomplishments was common; but such a chronicle may serve to indicate to us what was the ideal aimed at in the education of a Saxon nobleman. His followers would naturally emulate his prowess in the sports of the field, though they would have no chance of imitating him in his knowledge of letters and other softer accomplishments.

From their simple mode of life, the Saxons did not expect elaborate provision for their comforts. They gathered around their lords, and were easily contented with food and shelter. The houses of the time were therefore of corresponding simplicity. From the perishable nature of their construction few remains are left, by which we can determine their architectural character. We can suppose that some of the greater thanes may have desired to display their importance by decoration. The woodwork may therefore have been occasionally carved with representations of the animals, fishes, and reptiles with which they were familiar from the sports of the field, and these may also have been painted and gilt with a certain rude magnificence. Spoils from enemies would also grace the 'hall,' and encourage the armed retinue of the lord.

Its gradual elaboration.

Gradually, as time went on, the hall tended to become more architectural; wooden posts gave way to walls of stone, and the thatched covering to more solid wooden roofs, covered with shingle, stones, or tiles. In the more important buildings, stone columns took the place of wooden posts, and semicircular arches carried the roof above, adding both to convenience and to architectural effect. The capitals and bases of the columns often indicated their Roman parentage, by a rough imitation of ancient forms. Windows became common, though glass was as yet too great a luxury for general use. The openings were formed by stones placed as lintels, and also angle-wise, were ultimately arched in, and at times carved and frequently decorated with the zigzag ornament, which now came into use. Iron work was scanty; but some beautiful specimens of hinges, locks, &c., show us that the smiths of those days possessed both skill and taste. This was perhaps only natural among a warlike people, whose first cares would be directed to the manufacture, and after that to the decoration, of their arms.

Two floors and staircases.

The Saxon houses followed Roman precedents, and consisted, for the most part, of a ground floor only. There may have been exceptions, in the one case as in the other. That the Romans used an upper story we know, especially in cities; but the arrangement was unusual, and it was not until the twelfth century that it became common in English houses. We then find the buildings planned of a rectangular form, longer one way than the other, and divided into two separate stories by a floor. The upper story was the hall, and the room under it was vaulted, and approached by a different entrance. The stairs to the upper story were, in early examples, arranged in flights outside the building. Afterwards the stairs were covered, and some of you may know the beautiful staircase at Canterbury of this description. Attached to the hall, and behind the daïs, was the principal chamber, which was called 'solar,' or 'sollere,' a name supposed to be derived from 'solarium,' the word used by the Romans for the upper story or terrace, where the inmates went to enjoy the sun. It was only by slow and gradual steps that glass began to be used for windows, which were at first filled with canvas, or some such material, or

closed only with shutters. The openings were small, and often mere slits in the wall. Inside they were splayed widely towards the apartment. Wooden shutters, internal and external, were fastened to the walls by iron hooks. In some instances they were hinged at the top of the window, and opened outwards, being kept open, when required, by props. The interior of the window was finished so as to form a stone seat; and when the wall was thick enough, double seats were contrived transversely, as is shown in the case of Aydon Castle.

The Norman castle and houses.

In passing from Saxon to Norman work the transition was but gradual. The general distribution of the plan remained the same, while new and improved details took the place of more primitive constructions. The Normans may be credited with more fastidious tendencies than the conquered Saxons, but it was not at first that their influence became visible. The chief care of the conquerors was to secure their footing, and it was to military rather than to domestic architecture that they first devoted their energies. The Saxons had but few fortifications, an embattled wall surrounding their homesteads being the usual mode of exceptional protection in their time. The Normans, as we have already seen, indicated the nature of their dominion by erection of strong fortresses, with towers, walls, and gateways, recalling the structures of their own country, rich in all the resources of military architecture. In these castles nothing was neglected to give them strength, so as to enable them to stand a siege, whether they were attacked by the subject population or by rival lords or rebels.

In some of the later examples are found chimneys of good design, and even mangers for the horses, massively constructed in stone. As regarded houses, however, of small importance, the Normans followed the custom of the country, and building in stone was a rare and costly exception to the general rule. Their style is based on the Romanesque, an imitation, more or less complete, of the forms of Roman art; and may be roughly described as characteristic of the twelfth century, during which the principal Norman buildings in this country were executed. If the remains of their domestic architecture are scanty, we must remember that such archi-

tecture can only flourish in times of tranquillity, and public order was at this time far from secured. The house of the great lord was, in every sense of the word, his castle. Within its walls, and around them, dwelt a motley host of armed retainers, scorning commerce and the arts of peace. The tillers of the soil lived in huts, and if some few Saxon thanes kept up a sort of independence, it was but fitful and rare, and the Norman influence retained throughout the country its hardly won predominance. At Windsor, Rochester, Norwich, Pevensey, and many other places, you may find specimens of the work of this time, illustrating the military architecture of the Normans.

The hall.

In respect of domestic work, we find the hall continuing to dominate the plan. It was the general living-room as before, and the occupants often slept in it. Adjacent chambers gave, in important cases, the additional convenience of separate sleeping-apartments. The Latin of the period gave the title of 'aula' to the great room, and the palace of the sovereign was known as 'aula regis.' By the French, the room was styled 'salle,' and the Normans naturally brought this designation with them. From these names, the transition is easy to our own word 'hall,' which in time came to be applied not only to the principal room, but to the house itself of an English nobleman or gentleman. The halls of later times were often of great magnificence, and were sometimes on a grand scale, as at Westminster. The roof was frequently supported by posts of wood, or by columns and arches of stone. In certain cases these supports were in the centre, and supported the ridge of the roof. More frequently, however, they were placed at the side, adding an aisle or aisles to the great room.

The kitchen and offices.

The kitchen was in a separate building, often detached. The culinary arrangements were not elaborate, and were often performed in the open air. This will appear a natural arrangement for the rough cookery, which piqued itself on roasting oxen whole, and indulged in similar achievements, remarkable for magnitude rather than delicacy. A courtyard separated the kitchen from the hall. Around it were grouped the subsidiary apartments, for larder, buttery, scullery, &c., and the dinner was taken across to the hall, through the open

air. In some buildings the kitchen and buttery adjoined the hall, very much as we now see them in the college halls of Oxford and Cambridge. In such cases there was often a vestibule, or entrance corridor, cut off from the hall by a screen, according to the arrangement which is still familiar to us in those examples. The kitchen and buttery would thus open into the vestibule, and the inconvenience of carrying the dinner through the open air was avoided.

The plans above described were, as far as we know, the usual arrangements of the domestic buildings of the Normans. The hall of the sovereign differed in magnitude, rather than in general design, from the manor-house of his lords and vassals. Some halls were, of course, more magnificent in adornment than others; but all seem to have had the same essential features, and the type, thus adopted, has influenced the plans of our English houses during the succeeding centuries. The great hall is now, indeed, the luxury of the rich in modern domestic buildings; but this arises from the love of privacy which has distinguished later times, and from the consequent preference of comfort and convenience, to the ruder, if more stately, arrangements of ancient days.

Characteristics of Norman architecture.

Before proceeding to point out to you any remains of Norman dwellings, it may be well to devote a short time to describe to those who are not architects some of the characteristic details of the architecture of the period. In so doing, it is not necessary to confine ourselves to secular examples, for the features which illustrate the style were, as a matter of course, common to all buildings erected at the time. The distinction between the architecture used for ecclesiastical and that employed for domestic purposes is altogether modern. In Mediæval times the workmen knew but one style of design, and used it for all purposes. The building to be erected might be a palace, or a barn, a church, a castle, or a dwelling-house. It might be plain or decorated, dignified or severe; but the style was the same. As a consequence, we are able to recognise the work of the time, by almost any relics that are left to us.

Enriched doorways.

We have seen that the Normans followed the traditions of simplicity left to them by the Saxons. Their works were,

at first, indeed, undecorated, even to baldness; but they added gradually an amount of decoration which renders their architecture (as, for example, in many Norman doorways) often ornamental in the highest degree. The mouldings were at first few, simple, and such as could be easily worked. The columns were of great size when they were used to support arches, although the attached shafts to doorways, windows, and arcades were of moderate dimensions. The arches were semicircular, of plain mouldings, or even with members plain on plan, with square angles. The doorways were often deeply recessed and very effective, with attached shafts, and bold mouldings, sometimes highly enriched. In the ornaments of the latter, the Romanesque influence may be clearly traced.

Windows.

The same remark applies to the arrangement of the windows, when anything more ambitious than a single light was attempted. In such cases the mullion and tracery of future days were prefigured by the arrangement of a double arch springing from a central shaft, with capital and base of its own, just as we see it in the Romanesque and Gothic architecture of Italy. In the latter, the columns are frequently twisted, and sometimes decorated with shallow flutings. The same method of ornamentation is found in Norman work, in which the large columns often have their surface ornamented with flutings of a similar character, in zigzag or spiral lines. The zigzag ornaments of various kinds in which the Norman architects delighted, may also be traced to a similar source. These zigzag enrichments are often of great beauty, and sometimes of great complexity, being so arranged as to interlace with one another in a very complicated manner, as may be seen, for example, in the archway on College-green at Bristol.

Pillars.

The large columns, from being circular or polygonal on plan, became gradually clustered, in various degrees of elaboration, thus paving the way for one of the most graceful features of the succeeding styles of Gothic art. There is, however, I think, a special beauty in the plain circular columns of early days. It is essential in a column that it should not only be adequate in fact, but also obviously sufficient for the due performance of its duty, which is to sup-

port a weight. This office was well discharged by the plain and sturdy Norman columns; and it may be doubted if the refinements of later days, with their clusters of numerous vertical shafts, sometimes with carved mouldings between them, did not involve some compromise of principle.

Arches. The Norman arches were semicircular, sometimes a little stilted, but never pointed, except when they intersected, and until the transition to Early English had begun. They were of moderate dimensions, and resting, as they did, on massive walls and pillars, were not calculated to exercise that destructive thrust upon the building which so often deranged the plans of succeeding architects.

Walls and buttresses. Norman buildings have, however, suffered from defective construction of the apparently solid walls, which are often built of rubble, and only cased with stone. In some cases also, as at Peterborough Cathedral, the abutments have been insufficient, and the thrust of the arches has proved too great for portions of the walls. In the case of abutments, the science of building was not far advanced; and the Norman architects relied little on their buttresses, which were broad, and of small projection, often resembling pilasters rather than buttresses, and here recalling once more the Romanesque type of work. The boldly-projecting buttress, with its wealth of decorative construction of arch and pinnacle, was not as yet introduced, but turrets were not unusual, and they terminated frequently with high pyramidal roofs, thus indicating the development of the spire in the future.

Wall arcades. Vaulted roofs were only occasionally employed, but at Canterbury we have a good specimen of a late Norman groining, carried out by a Frenchman, William of Sens, who was, of course, well acquainted with the more frequent arched roofs of his own country. A beautiful feature in Norman buildings was introduced by the construction of arcades, sometimes complete, but often applied to the walls, so as to form a surface decoration. We have a good example of the perfect arcade in the staircase at Canterbury, to which reference has already been made, and numerous instances exist of the wall arcades, which sometimes served also as shallow niches. Corbel courses, with intersecting arches, are

often to be met with, and are again a feature in common with Romanesque work.

Wall decorations.

As the style advanced, the decorations increased, and gave richness of effect to the portions of the building in which they were used. This richness was enhanced by the contrast with the simplicity and general plainness, which still characterised the great masses of the structures built by the Normans. The large plain spaces of the walls were enriched by surface decoration, consisting of diapers and interlaced patterns of much beauty, and round panels or bosses were employed, to add a further ornament in the jambs of recesses and the soffits of arches. The earliest designs of rough zigzags, with diagonal and rectangular ornaments, were such as could be executed by masons with little skill, and by the use of the axe. The later work would tax the chisel of the advanced workman.

Capitals and base mouldings.

The columns had capitals of a peculiar character, with a square abacus. The section of this member was almost uniform, and is composed of a large hollow, with a broad fillet above it. Between the fillet and the hollow there is often a little sunk channel, which is a common sign of Norman work, and gives to this apparently very simple moulding a certain piquancy of effect. The rough and early ornament was generally shallow; but afterwards we find details more elaborate, and carved with great effect of deep undercutting. You are, doubtless, familiar with the ordinary type of Norman capitals, which has been called scalloped, from its resemblance to a scallop-shell; but this is only one form of those commonly used. In others, we find, again, traces of the origin of the style in the obvious imitation, in a manner more or less skilful according to circumstances, of the volute in the Ionic and succeeding styles of Classical architecture. This feature is very clearly seen in the very beautiful capitals in the choir of Canterbury Cathedral, and here may be found a further reminiscence of the Roman capital, in the cutting off of the angles of the abacus. These capitals are, however, of so late a style as to be properly called Transitional, rather than Norman. They are among the richest examples of this important feature, and contrast greatly with the earliest and simplest form, known as the cushion capital, which is deve-

loped from a square block, by cutting and rounding off its lower corners. The base mouldings were plain and severe. Sometimes an imitation of the Tuscan and Attic bases of Norman times is evident. They are usually placed on a plinth, or sub-base, which serves a constructional use, and adds to the apparent solidity of the columns or piers.

Vaults and ceilings.

The piers often supported wooden roofs, for Norman vaults and groinings are not found until the style was far advanced. The barrel vault was naturally the first form used. It came naturally from the employment of the arch in windows and doorways, which, with their deep recesses, are, in fact, specimens themselves of barrel vaulting. The addition of flat-arched ribs soon followed, and then a plain mode of groining without ribs. Ultimately the latter feature was introduced, and from diagonal ribs the step was not long or difficult to the employment of the pointed arch. Arched vaults, however, of great span are not found in Early Norman work, and, where the width was considerable, a wooden roof and ceiling were employed, as at Peterborough Cathedral. Such ceilings were intended to be painted, and at Peterborough we see the original design carefully restored. However interesting such decoration may be in an archæological sense, it must be confessed that it is very inferior to even the simplest form of vaulting, and it appears to be especially unsatisfactory when considered with reference to the plainness of the work below, the massive piers and arches of which would seem to be justified only by the necessity for supporting a roof equally solid in character.

Transition to the pointed style.

In the later examples of Norman architecture, the intersecting arcades, of which I have before spoken, became common. The two semicircles cutting each other produced an acutely pointed arch. The ribs of the vaults developed a similar form, and the pointed arch, with its almost boundless facilities for elaboration, became an accepted fact in English Mediæval architecture. The carver's chisel was freely used, and sculptured decorations became frequent. Round and pointed arches were found in the same building; the tooth ornament made its appearance, and everything was ripe for a new transition. We will, therefore, leave at this point the description of the peculiarities of Norman work. I hope it

has been sufficient to enable you to apply it in practice, so as to distinguish Norman details from those of later times, further allusion to which I will defer till a future occasion. For examples of the various details which I have endeavoured to explain to you, I have referred, in some instances, to ecclesiastical buildings, as being the most important and best-preserved specimens of the style which are left to us. They apply, however, to all buildings of the period, to a greater or less degree.

The 'long and short work.'

In those of the Saxon era, erected before the Conquest, we find also some marked peculiarities, which may be now briefly mentioned. One of them relates to the manner of constructing masonry at the angles of the buildings, by the introduction of long and short stones alternately, the walls themselves being constructed of small stones roughly shaped. This has been called 'long and short work,' and is not to be recommended as good masonry. It is, indeed, so much at variance with the tradition of the craft that some archæologists suppose it to have been introduced by men familiar with the plane, rather than the mallet and chisel; and as the Saxons were, as we know, well accustomed to wooden construction, this long and short masonry has been stigmatised as 'carpenters' work.'

The baluster shaft.

Another peculiarity is found in the balusterlike form of shaft introduced in windows and arcades. There is a good specimen of this feature in the tower window at Earl's Barton, in Northamptonshire. The shaft is here obviously taken from a baluster, probably of Roman origin, and would also be more appropriate for a wooden construction than for a building of stone.

Specimens of Norman buildings.

The changes which the Conquest introduced brought about the Norman style of building, and the circumstance that the change was complete, though gradual, seems to show that everything was ripe for such a consummation, and that the so-called Saxon architecture had served its day. We know that our forefathers had little of that respect for antiquity which most of us at least profess to feel. Although recognising precedent, they were fully persuaded that they were advancing and gradually improving upon the forms of the past; they had, therefore, no scruple in destroying the

old to make way for newer constructions of their own. Thanks to greatness of scale and to solidity of work, we possess numerous remains of Norman buildings, for they have not proved easy to be pulled down, and are too large in their parts to be easily adapted to the lighter and more elaborate architecture of succeeding times. At Winchester, a not very successful attempt was made to case the Norman piers with moulded stonework of a later date. The effect was heavy, and not such as to encourage similar operations. The work, however, is interesting as showing the daring spirit of those days in matters architectural.

St. Mary's Guild at Lincoln.

We have at Lincoln some considerable remains of domestic work in the buildings known as St. Mary's Guild, or John o' Gaunt's Stables, and the Jew's House.[2] Both of these buildings are interesting, and deserve some explanation. The former is the more extensive, but is modernised by the addition of a later roof. It possesses a handsome cornice, and has the flat pilaster-like buttresses, typical of Norman work. The entrance doorway is decorated with ornaments of the later or Transitional period, and the windows are partly Norman, and partly Early English, in their details. There is a doorway of the square-headed trefoil form, and the windows are coupled together with a shaft between them. The bricks are of the thin tile-like description which were used by the Romans. A fireplace, with a chimney, exists in the upper story. The whole presents to us a valuable example of Norman domestic work.

The Jew's house.

The Jew's House already referred to is small in dimension, and has, indeed, but two rooms, though others may have originally existed. The chief interest it possesses arises from the richness and characteristic design of the external ornamentation. We find in the latter many of the details which I have already pointed out to you, as illustrating the style of the time. There is, first, the deeply recessed doorway, with its shaft, and double zig-zag archivolt. The archway over the door is made use of in a curious manner to support the fireplace and chimney belonging to the upper story. The chimney itself has been modernised. The name of the Jew's

[2] For illustrations the reader may be referred to Parker's *Domestic Architecture*, both in this lecture and those which immediately succeed.

House may possibly be a misnomer; but if not, it is remarkable as being indicative of the position of the Jewish people in England at this time. It may seem strange that so notable a building should by tradition be ascribed to a member of a race too often despised and ill-treated. They were, however, as we know, powerful at this period, as they have ever been, by the possession of wealth, although not daring to display the same too openly. If the house we are now discussing was in reality the dwelling of a member of that ancient race, we may be sure he must have been a personage of wealth and importance; for such houses were very rare in the twelfth century, and the decorative character of its architecture marks it out as an exceptional instance. The windows deserve attention, particularly the two-light window, with its double order of mouldings. We find here the characteristic shaft as a mullion, and the upper part of each light is made square, as is frequently the case with Norman openings. The small window, with a trefoil head and a pointed arched drip-stone or label, is no doubt a later addition, and the lower part of the elevation is altogether modernised. The principal chamber was evidently on the first floor. The peculiar treatment of the arched doorway, and chimney supported by it, is found in another house, near to the Jew's House, so that it was probably a favourite expedient in the locality. We see by this interesting monument, first, how easily, and yet how faithfully, the Normans applied to domestic work the details with which we are familiar in their sacred buildings. We notice, secondly, that we are approaching the period when men began to display some care for architectural beauty in their dwellings. We have left behind us the plain wooden huts of the Saxons, and are presented with a style of solid construction and decorated masonry.

Gradual transition from wooden to stone buildings.

It must not, however, be supposed that such houses were common: for up to the time of Stephen, and even later, the domestic buildings of our towns were constructed of wood, and in London we know, from the destructive effects of the Great Fire, as late as in the reign of Charles II., that the wooden mode of building still existed, even at that comparatively recent date. The municipal authorities, however, did

their best to encourage the citizens to build in a more durable way, and, as a precaution against the spread of fire, to use stone instead of wood. In the days of Richard I., certain definite regulations were laid down in this respect, and were contained in a document known as the 'Assize' of 1189, and published in Mr. Parker's work. In order to facilitate the change from wood to stone, we find various privileges accorded to the improvers, one of which savours of confiscation, for it provides: 'If any one would build of stone, and his neighbour, through poverty, cannot, or perchance will not, then he shall yield unto him desiring to build 3 ft. of his land, and the other shall make a wall upon that land, at his own cost, 3 ft. thick and 16 ft. in height.' Party walls have been enormously increased in height since this regulation was made, and it would have been well for the solidity and comfort of our houses if they had not, at the same time, decreased in thickness.

Building regulations.

The regulations of the 'Assize' refer in great detail to the erection of party walls, but they say little about the fronts of the houses towards the streets. The materials for such fronts, therefore, continued to be chiefly of wood, as being cheaper than stone, and more convenient in reference to the prevailing habit of gaining space in the upper stories, by projecting stories over the ground-floor shops or rooms. In spite of all regulations improvement was slow, and destructive fires frequently occurred. In London there was a serious outbreak in the reign of Stephen, and another in the reign of King John, in the year 1212. After the latter event the rules, which may be described as the origin of our Building Acts, were revised and strengthened. One of the new rules runs thus: 'Whosoever wishes to build, let him take care, as he loveth himself and his goods, that he roof not with reed, nor rush, nor with any manner of litter, but with tile only, or shingle, or boards; or, if it may be, with lead.' All wooden houses which imperilled their neighbours, by causing danger from fire, were to be pulled down by the aldermen and their assistants, and before every house there was to be a tub, either of wood or stone, kept constantly full of water. The removal of dangerous houses was evidently not thought a difficult task, for every alderman was to be provided, under

pain of a fine, with 'a proper hook and cord,' and with these simple implements the houses, or hovels, were to be pulled down, in a summary manner, on their condemnation. The wages of the different classes of building workmen were fixed, and orders were issued to coat with plaster, or a kind of concrete, the roofs previously covered with reeds or rushes.

Special directions were given as regarded the cook-shops, which were the eating-houses or inns of the period. Mean sheds had arisen round these cook-shops, and as they were considered dangerous, they were marked for destruction, 'so that there may remain only the house (or large hall) and bedroom.' Some of the cook-shops or inns acquired considerable importance, and, with lodgings for students and others gathered around them, became centres of resort for those who followed similar pursuits—as, for example, in the inns of court, where the lawyers congregated. Flues were apparently forbidden in party-walls, and the cooking-stove was commonly placed in the middle of the kitchen, with an opening in the roof above for the smoke. Regularly constructed chimneys were not, however, unknown, as we have seen in the case of the Jew's House at Lincoln, and they may have been constructed in the front and back walls, and in some cases carried up in the gables. The 'Assize' contains further provisions for sanitary contrivances, which indicate an increasing attention to domestic comfort, and mark a distinct advance upon the ruder customs of the Saxons.

Gradual improvements.

We have now sketched, though imperfectly, the arrangement of the houses of the twelfth century. The remains of them are, as I have said, necessarily scanty; but enough can be found to indicate with tolerable clearness the general plans on which the Normans worked. These did not in all probability vary much in the various parts of the country, except from accidental circumstances, such as the prevalence of particular building materials in different districts. The architectural details, as has been seen, followed much the same rules that were observed in the more important ecclesiastical buildings. Painting and gilding were employed for decoration, particularly in the capitals of columns; and some approach to external contrast of colour was often obtained by

the use of flint and stone, and contrasted materials of various kinds. The hall was often spacious, and treated in a handsome architectural manner, whether with or without pillars. A gradual advance was being made, at the same time, towards domestic comfort and privacy, and rules were found necessary to restrain the caprices of individuals in our large cities. We find everywhere that willingness to improve on the past, without wholly breaking with it, which, if common with our ancestors of the twelfth century, is certainly not unknown to the Englishman of the nineteenth.

LECTURE III.[1]

DOMESTIC ARCHITECTURE, THIRTEENTH CENTURY.

In my last lecture I dealt with the question of the domestic architecture of the twelfth century, the style of which we may, for convenience, call Saxon and Norman. We saw that it was marked by great simplicity of general arrangement, although not without care for architectural effect, and that it might even lay some claim to magnificence, particularly towards the close of the century. I propose now to pass onwards to the succeeding epoch of Gothic architecture—the golden age of the style, namely, the thirteenth century.

Gradual change to thirteenth century architecture.

We shall not find the transition rapid or startling; the architectural glories of the thirteenth century grew naturally and by degrees from the preceding styles, and the old Norman work was of too solid a description to be easily destroyed. Moreover, the time at the commencement of the period was not favourable to the pursuit of the arts of peace. If in the clash of arms laws are silent, the same pause is felt in the quiet progress of architecture. Without security men will not do their best, and they can have little care for beauty in architecture, when the first necessity is to procure safety for their lives and goods. Castles, therefore, and not houses, were the principal work of the unsettled times of King John. Not that many of these important works were undertaken *de novo*, but old fortifications were repaired and strengthened, and new defences were devised for existing structures. It was only by slow degrees that the great men of the day began to settle themselves in the country by building their manor-houses, and at first, even

[1] Delivered on Monday, March 12, 1877.

these were constructed so as to be capable of defence, in case of need. In the days of Henry III. and Edward I., architecture revived, and to the time of the former we ascribe that style of Pointed architecture popularly known as Early English.

Social characteristics of the time.

I. Before going into any detail respecting the forms of buildings which now came into use, we may perhaps dwell with advantage on some of the social characteristics of the country at this time, for by such circumstances domestic architecture is naturally influenced.

The Norman conquerors had, in some measure, assimilated with the Saxons. Land, at first held by them in right of conquest, became gradually subdivided, and tenancies arose, with sufficient security of tenure to encourage building. Forest laws indeed preserved huge tracts of country, and hindered its settled development. An immense portion of the land was consequently covered with wood, and formed the sanctuary for criminals and lawless men of all descriptions, who lived by the plunder of travellers, and on the game which existed in abundance. Wolves and wild cattle were found in the forests, and other desolate tracts. Travelling from place to place was restricted and dangerous, and there were few who ventured to live apart from their fellowmen, unless they could command a following strong enough to secure their houses from violence. Free and safe communication is one of the first signs of advancing civilisation. In the England of olden times the roads passed through extensive forests, and none were without their history of wrong and robbery.

Forest laws.

The Norman forest laws were of a very oppressive character, and many lives were sacrificed for what we should consider venial faults. The forests were strictly preserved for Royal use, and the day was not come when it was recognised that the people had their rights as well as the Crown. To interfere with the sport of the king was death, and the laws which preserved the forests for his use were most severe. It is a curious reflection that circumstances so change in the progress of time, that these laws, or the scanty remnants of them which have subsisted until to-day, have lately been successfully invoked in the interest of the people,

against whom they were originally directed. In our more artificial state of society, the preservation of open spaces, particularly near to large towns, has become a public question of vast importance; and in recent proceedings in respect of Epping Forest, the old forest laws of the Normans have been turned to the advantage of those who desire its preservation, by the Corporation of the City of London, who have stood forward as defenders of public right, in a manner very much to their honour.

Provision of roads.

Whatever value, however, we now ascribe to these forests, it is certain that, in early days, they were a serious danger to the people. Travelling was impeded, so that even the main roads near to London—as, for example, that to St. Alban's—were impassable in safety, without an armed escort. To meet this danger, orders were given to widen all main roads, and the bushes and woods were cut down and cleared away for 200 feet on each side of the road. If any proprietor neglected to do this, and a murder or robbery occurred, such proprietor was to be considered responsible, even to the extent of felony. The old Roman roads, as Watling-street, had determined the main lines of communication, and these passed for the most part through forests. To the clearance-laws above referred to we owe the wide roads, common in many parts of the country, with their grass sides and ample space, now too often disappearing under repeated encroachments. Agriculture is fast effacing these pleasing features. Hedges are grubbed up and palings advanced, corners are enclosed, and roads are narrowed, till they become mere passages between walls and fences. For all this there may be economical reasons; but the lover of country beauty cannot but deplore the change. In the thirteenth century width of roads was a necessity, and we may look back on the past with regret, if it be indeed a necessity of the nineteenth century to narrow them.

Ecclesiastical estates.

The clergy were leaders in most of the improvements in these times. They not only held land to a great extent through the great ecclesiastical corporations, but from the nature of their duties they were frequent travellers. To them the great fen countries, especially, owe their first improvements. Their tenants enjoyed an immunity from the

oppression and the caprice, which often pressed hardly on those who held land from individuals; and the ecclesiastical estates were consequently, as a rule, well managed and improving. Tolls were allowed to be levied for the repairs of roads, and also for the erection of walls of defence round the principal towns. A watch was kept on these walls, and a curfew bell generally rang about nine in the evening, after which time all good citizens were expected to be at home. Drinking-houses were closed at the same hour, and lodgers and strangers were obliged to give security for their good behaviour.

The condition of the Jews.

The Jews had obtained great wealth, and with it power and consideration, but they were, nevertheless, exposed to fierce hatred. It was difficult for a fanatical and prejudiced population to understand that their riches were acquired by patient toil, self-denial, and ability. A simpler and more acceptable explanation was found by the ascription to them of sorceries and illicit arts. Their houses were, as has been already noticed in the case of the Jew's House at Lincoln, remarkable for importance and, we may suppose, comfort; but this circumstance, doubtless, only added to the jealousy with which they were regarded. The Jews were expelled from England by the bigotry of the age, and carried for a time their riches and their talents to benefit other countries. The populations of our English towns were at this time small in number, and were sensibly reduced by the expulsion of the Jews. Certain families and localities became identified with particular industries. In this manner the Jews connected themselves with the goldsmith's art, the development of which was retarded by their banishment.

Guilds of labour and trade.

That which has been called the 'organisation of labour' in modern times, was understood and practised in the Middle Ages, although not altogether in the spirit displayed by it in our own days. Each department of trade became a corporation or guild. Goldsmiths, carpenters, masons, smiths—all had their separate societies and special rules. Apprentices were bound by the law, as well as the custom, of their craft. They were obliged to learn, and, until they had proved their ability, they could not work for themselves as regular tradesmen.

The old City companies and their proper functions.

You are aware how the tradition of these things lingers among us still in the great City companies. The day for regulating trade in the spirit of the Middle Ages is gone—some of us may fear for ever, as we see the quaint excellences of the older work overborne by the fierce competition of the day for multiplicity and cheapness. The companies, however, still stand out as landmarks. Some of them, at least, as the 'Goldsmiths,' have still connection with the trade, and discharge certain public responsibilities; and I cannot but hope that a time may come when they may see their way to realise enlarged schemes of public usefulness, in reference to trades connected with art. We need not trouble ourselves here with trade as far as *quantity* is concerned; that will always depend on the state of the world's markets, and our machinists are always turning their attention to cheapness and incessant multiplication. What we do desiderate is *quality*. We wish to see art brought to bear, indeed, on common objects, made by hundreds and thousands; but in order that this may be done, there must be rewards for the patient workman, who will put his best work into all he does, and who will be proud of the quality, rather than the quantity, of the results. This is not the spirit which commands success in the close competition and higgling of the commercial market. It is one which needs the fostering care of intelligent and wise patrons, who are aware of the difficulties of the case, and are not to be led away by the capricious whims of fashion. To perform such honourable duties, the great livery companies of London appear to me to have special aptitudes. They have ample means; they have machinery which could easily be put into action; they have the steadiness and importance which are the results of their long-continued corporate existence. They are always ready in the cause of charity, and they have never been charged with forgetting the virtue of hospitality. May we not appeal to them in the cause of art? Individual patrons, however willing, can do little, and must have but a fleeting influence; but I cannot conceive any object, to which a portion of the great influence and resources of the City companies can be more usefully directed in the public interest, than that of fostering the arts of their time, more particu-

larly with reference to the special trades with which they are assumed to be connected, but from which they are too often divorced.

The defects of trade unions.

I believe great public advantages might be found to spring from a renewal of old ties. We live in times when the right of association has been definitely recognised, and when it is consequently spreading and gaining power from day to day; and it would, I think, be a clear gain to the community if we could point to trade companies, which, while upholding the dignity of commerce, would dwell upon the duties as well as on the privileges of labour, which would encourage art and reward excellence. We know little of such influences now; and when we speak of trades and guilds which prescribe working rules, settle wages, and the like, we naturally think only of the modern Trade-unions, by means of which the workmen gain a power by association for common objects. Scarcely a day passes that we are not called on to notice the action of these societies, and not always, it must be said, can we approve of them. No one now-a-days would contest the right of working men to form themselves into societies for the protection of their interests; but, as these societies become matters of public importance, they must expect to be subjected to free criticism, and the people at large will ask the question, 'Do they conduce to the public good?' If we all sympathise with the honest efforts of a class to raise itself in the social scale, yet we cannot believe that the right manner of seeking this laudable end is to damp the ardour of individuals, to discourage special skill, and to dream of an equality which has never existed, and can never be called into being.

Contrast with the old working guilds.

The guilds of old were as careful of the interests of their men as the trade-unions among ourselves can be; but the rare beauty and excellence of their work suffice to show the spirit of their rules. An apprentice had really to learn his trade, and to excel in it. He then advanced in its ranks, and ultimately became the master workman. In that capacity he dealt directly with his employer. There were no great contractors or middle-men. Huge and hasty undertakings were unknown. There was time and opportunity for the workman to take pride in his work. A rich man could take his gold to the goldsmith, who would fashion it

for him, and have it guaranteed by the mark of his Company. A monastery, or a great lord, desiring to build, would fell the timber and quarry the stone. He could then seek the master workman, who would find the labour and trade skill. Work was not so plentiful that his subordinates could lightly quarrel with him, and strikes, at least on a large scale, were not as yet a feature in the annals of industrial art.

It cannot be disguised that artists have much reason to look back at these things with wistful eyes. Our workmen pride themselves, and, I believe, on the whole justly, on their skill and good sense; but we have, nevertheless, but too often to deplore the rough and careless manner of work, which has become the ordinary custom of our time. The architect is the true friend of the workman, anxious for his well-being, glad to welcome his social rise, and having no opposing interests. It is not his place, therefore, to utter smooth things, but to tell the truth, and in this spirit to point to the decadence of artist-like spirit and thorough execution in the common work of the day. It may be well that trade-unions should busy themselves with the wages and privileges of their supporters; but the friends of our workmen would feel more hopeful, if they heard more from those societies of the duties expected from them—if they found them the nurseries and loving mothers of genius—if they saw that the obligation was recognised that to earn justly a '*fair day's wage*' there should really be a '*fair day's work*.'

The private house. Timber and stone work.

II. To return now to the question immediately before us. We shall find that timber was still largely used in private houses, stone being then, as now, a luxury of the wealthy. A wooden hut was for a long time the type of domestic building; and, except where more solid materials were rendered necessary for safety in disturbed parts of the country, it was commonly employed for all the minor structures of the time. The great nobles, the bishops, and abbots might, indeed, indulge a more costly taste, but lesser persons had to content themselves with wooden constructions. Brickwork was not yet common, and few early examples of it remain. By degrees, the various materials came to be mixed in the construction of the same building, so that

the upper part of the house would be of wood and the lower part of stone. In such cases, the latter was contracted, as much as possible, from motives of economy, and the upper stories were projected over the substructure. It was easy to make the floor-beams longer than the rooms below them, so that their ends should project. Space was therefore gained in this way, and the lower part of the house was sheltered, and kept warm and dry. The same mode of building is followed in Switzerland and other mountainous countries at the present day; and you have doubtless often been pleased with the picturesque arrangement of outside stairs, balconies, and overhanging galleries, which such a method of building favours. We find it in some of the old inns in this country, and not long since Southwark could boast several good specimens of the class, now (I fear) gone, with other relics of a similar kind. An enormous number of such structures were swept away by the Great Fire of London.

The plaster work, roofs, and chimneys.

The spaces between the wooden framework of the walls of timber houses were filled in with a plaster, of lime, sand, or mud, mixed with straw to ensure its keeping together. This was generally laid on laths, after the usual manner. Many wooden manor-houses built in this way are very picturesque, and some counties still abound with them. The roofs were of high pitch, and the chimney often took the form of a central shaft, or cluster of shafts; thus avoiding danger from fire to the wooden walls, and concentrating the heat where it was most wanted, namely, in the middle of the house. I cannot pass from the mention of this arrangement without noticing with regret a too common habit of designing chimneys in the external walls, a plan which often sacrifices the comfort of the inhabitants to an assumed necessity for picturesque design. In good houses, with thick walls, where solidity and substantial construction have been more esteemed than cheapness, the architect may fairly employ a mode of design which he may think adds piquancy to his elevation, and often convenience to the plan; but, in other cases, external chimney-shafts are not to be commended, as I am sure many an occupant of a country parsonage or villa, in the building of which economy has reigned supreme, has had occasion to discover.

In the manor-houses of the thirteenth century the hall maintained the place which it had hitherto held. Here the lord received his tenants and neighbours; here they feasted, here also they often slept; and around the hall gradually arose the more artificial arrangements of later times. The mode of life in the manor-house differed only in degree from that of the king's palace, and in Westminster Hall we have a splendid example of an 'aula regis,' or royal hall. The hall was surrounded by a spacious enclosure, in which were the kitchens and other offices. On great occasions, as at coronations, the space was nearly filled by temporary erections, built to accommodate the overflowing number of the visitors. The hospitality of the time forbade that any should be sent away empty, even if there had been inns for them to go to, which was not the case. If the great hall were not sufficient, other smaller halls were erected around it, and kitchens built for their especial service. The great enclosures which surrounded the hall were necessary for defence, and visitors, with their retinue, horses, and servants, had all to be provided for. This was no slight matter in days when a great nobleman would take in his train 150 to 200 horses, with the necessary attendants, besides an armed escort.

The hall and surrounding enclosure.

Although we now begin to find traces of a desire for more comfort than was sought in previous times, it was only by slow degrees that matters which we think essential were adequately attended to. Thus glass windows were for a long period rare and costly; so that even in large houses the upper lights were often the only portions glazed, while the lower lights were closed with wooden shutters, after the ancient manner. The art of glass-making was not unknown to the Romans. It was never lost in Italy, and was freely used there before it became common in this country. During the recent modern revival of taste in Italian art we have seen a revival of glass manufacture in its ancient seat of Murano, whence came the glass used in many of the chief buildings of Italian Mediæval days. In Britain the Romans may possibly have imported glass in small quantities, and used it in a very sparing way; but it is obviously unlikely that this could have been done on any large scale, considering the difficulties of transport and the nature of the mate-

Use of glass for windows.

rial. These circumstances will account for the scarcity of glass in this country in the thirteenth century. The French, and the inhabitants of the Low Countries, or Flemings, seem to have had greater skill than our ancestors in making glass; for it became a regular article of trade with those countries, as well as with Venice, the latter place being chiefly famous for drinking-cups, and vessels of an ornamental character. Window-glass came chiefly from the Flemings, with whom extensive commercial dealings had sprung up in connection with the wool trade. This trade was a very important industry in this country, and our merchants sent wool to Flanders in large quantities, and took as part payment window-glass in exchange. Among the trades of the time we find occasional notice of that of the 'glazier,' but there is no mention of that of the glass-maker.

Window-shutters.

Such being the state of the market for this important item of the builders' materials, and such the difficulty of procuring it, glass made its influence felt but slowly in domestic buildings. The churches, the royal palaces, and the great religious houses, had to be supplied, before the manor-houses of the gentry and less important buildings could have their share in the improvement. Wooden shutters were therefore still common, and cases exist where the stone mullion, which divides the opening into two lights, is pierced with holes, through which the bars were passed to secure the shutters at night. It may easily be supposed that such shutters did not close the windows very thoroughly, and that draughts of cold air abounded. Even the queen of Henry III. was not exempt, it would seem, from this inconvenience; for there is a record of an order from the king directing glass to be placed in the window of the queen's wardrobe in the Tower of London, instead of wood as then existing, 'so that that chamber might not be so windy.' The walls of this period being usually thick, there was ample opportunity for placing shutters either within, in the thickness of the wall, or outside. Both methods were common.

Windows, roofs, and gutters.

In the interior, the window-cill was commonly formed with a seat, sometimes a plain bench of stone, and at other times more elaborately arranged with returned ends and

mouldings. This treatment of the cill is almost universal in dwelling-houses, and serves as a distinguishing mark between ecclesiastical and domestic work. The ordinary type of window was the two-light form, common with the Normans, and divided, as in their practice, by a column or shaft. The roofs were covered with stone, tiles, and slate, and still occasionally with thatch or shingles. Crest ornaments began to appear on ridges, and hip-knobs and finials were also seen. Stone gutters, sometimes covered with lead, carried the water to projecting spouts, which developed into the quaintly curved gurgoyles.

Fireplaces.

In the interior of their houses, the thirteenth-century architects soon turned their attention to the fireplaces. These, however, were far from universal, as the old custom still remained of having a hearth in the middle of the apartment, with openings in the roof over it for the passage of smoke. It must be remembered, in estimating the inconvenience of this practice, that the fuel used was wood, and not coal, with its black and blinding smoke. The arrangement of a central fire was general in kitchens, and was often used in halls and other large rooms. As, however, the convenience of a regular chimney became apparent, we find great attention paid to the design of the fireplaces. These are often richly carved and ornamented, and the practice continued until the latest times of Gothic architecture. Even when the latter had become merged in the Renaissance, the grandeur of the chimney-pieces still increased, and some very handsome examples are found in the Elizabethan and Jacobean mansions of England, as also in France and Belgium.

Ancient and modern requirements thereon.

There is something hospitable-looking in these great recesses, which gives a significance to the phrase of welcoming to the 'hearth.' In the architecture of the future there may be a change, but the artist has little reason to wish for it. At the same time, we cannot shut our eyes to the fact that wasteful fireplaces cannot always be a feature in our domestic economy, more particularly in respect of the homes of the poor. It has been urged that our pleasure in seeing the open fire is chiefly due to the inefficient warming and ventilation of our rooms. If a man feels warm, he does

not think of a fire, or expect to see one. With November chills, we look at our cold grates, and wish to see a bright fire burning in them. We say it is cheerful-looking and pleasant; but the very same object would be disgusting to us in the dog-days. We approach the fire, and gather round the hearth, because we are cold; and a chief reason of this is, that a large portion of the heat produced by the fire goes up the chimney, and the rest is so partially distributed, that one part of our rooms is as much too hot as others are too cold. Owing to the Englishman's affection for an open fire, and also to his conservative instincts in matters of habit, it is not probable that fireplaces will soon disappear from the homes of those who can afford to indulge their tastes; but, as our coal supplies approach more nearly to exhaustion, and fuel becomes dearer and dearer, it may well happen that architects will be forced to turn their attention to the substitution of other arrangements for the open fireplaces which have been handed down to us from our ancestors. There is no doubt, however, that in dispensing with them we shall lose a very striking and beautiful feature of architecture, and we can only hope that the change, if it come to pass, may be attended with compensations in the way of increased cleanliness, brightness, and comfort.

Remains of castellated architecture.

In continuing our architectural retrospect, it must be remembered that we have not yet arrived at a time when security against external danger could be relied on, and many details of the castellated architecture of the preceding century were still common. Such are the battlemented or crenellated walls of enclosures, and also parapets, and the external flights of steps by which the upper stories were often approached. Staircases, as we understand them, came into general use at a later period.

Walls and wall-panelling.

The interior walls were commonly plastered and white-washed. Sometimes a simple decoration might be added, and the custom of lining the walls with wainscoting arose, although this was very sparingly used at first, in consequence, doubtless, of its great expense.

Floors.

Wooden floors were occasionally found, though not often on the ground story. There the floor was more generally left with the earth pounded and rammed down, and covered with

straw or rushes. Paving tiles of a plain character were used during the reign of Henry III., who was anxious to promote the progress of art, and encouraged foreigners to attend his court, and to introduce improvements from abroad, when practicable. The earthen floors, saturated with moisture, and receiving all the litter from the tables, must often have offended a fastidious taste; and royal orders exist, one of which directs that a room on the ground floor of Windsor Castle shall be 'boarded like a ship,' while another says that the 'clerks of works' are to work day and night in order to wainscot another chamber 'with boards radiated and coloured, so that nothing might be found reprehensible in that wainscot.'

Decoration of walls in colour.

It was at this time that Italian priests were often to be found in England, in places of importance; and they must have brought with them the taste for coloured decoration common in Italy. Polychromy, in consequence, became readily adopted in English works, and wainscots, walls, and ceilings were frequently painted, the subjects being chiefly allegorical, or taken from the sacred history or the lives of the saints, and executed by the same artists whose works adorned the churches. Although the art may have been first introduced from abroad, there must have been plenty of skill among English decorators, or the fashion of polychromy could not have been so extensively followed as was the case. At St. Alban's, the Sacristan Walter of Colchester, an Englishman, was an expert in such work, and is described in the chronicles of the period as 'pictor et sculptor incomparabilis.' It was usual to paint the walls above the wainscoting, and it was not until a later time that the latter was carried up to the ceiling, as we see it in many Elizabethan houses. The wainscot being about six feet in height, there was a good opportunity for the painter to decorate the wall above it, which was done sometimes by representations of curtains, and sometimes by more ambitious designs. Thus, we find King Henry ordering Walter de Burgh to build him a chapel at his manor of Cliff, and 'to cause the chamber of our queen there to be wainscoted, and painted with a history.' Another royal mandate directs the sheriff of Wiltshire 'to wainscot the king's lower chamber,

and paint it of a green colour, and put a border to it, and to cause the heads of kings and queens to be painted on the borders.' He was also to paint on the walls of the king's upper chamber with the story of St. Margaret Virgin, and the four Evangelists ; and to paint the wainscot of the same chamber of a green colour, spotted with gold, and to paint on it heads of men and women.' The order concludes by saying that all these paintings are to be done 'with good and exquisite colours.'

Architectural taste of Henry III.

These extracts (for which I am again indebted to Mr. Parker) will suffice to show the extent of the taste for polychromatic decoration, which had now come into use, and had spread from the churches to the domestic architecture of the day. They also enable us to appreciate the interest taken by King Henry in the architectural improvements then in progress. His orders are most precise, and extend to the smallest details. Thus he tells the constable of the Tower of London, in one instance, that he is to have the walls of the queen's chamber, which is within his own chamber, washed and painted with flowers; he is also to cause the drain of the king's private chamber to be made in the fashion of a hollow column, as 'our well-beloved servant, John of Ely, shall more fully tell thee.' The king is thus shown to us directing the building, decoration, and detailed arrangements of the royal palaces. He encouraged artists at his court, and carried out large works at Westminster, both in the abbey and the palace; he attended personally to the repairs and enlargements of the various Crown buildings throughout the country, and assisted in the improvement of the parish churches, these being undertaken by the clergy and the local authorities. We find his favourite style of decoration is that mentioned in one of the above quotations, viz. green, with gold stars, and this fashion has been ascribed to the taste of William the Florentine, an Italian artist much employed by the king. This man was also an architect, and held the office of 'master of the works' at the palace at Guildford.

Increase of height of houses.

The houses in towns were still low, seldom having more than two stories; but the king was anxious to increase their height and importance. He was struck with the effect of

the architecture of Paris in this respect; for, after he had paid a visit to that city in 1254, we find it recorded that, 'when the King of England had passed through the street which is named La Grève, and afterwards the street towards St. Germain Antin, and then the great bridge, he observed the beauty of the houses, which are built of gypsum, or plaster, in the city of Paris, and houses containing three chambers, and some even of four stories or more, from the windows of which stretched forth a countless multitude of people of both sexes.' As regards this comparison with Paris, it may, however, be remarked that, in many important particulars affecting the health and comfort of the people, London, in the thirteenth century, had some points of superiority over its rival, which remain, in some degree, to the present day. Thus the streets were wider, the pavement better, drainage less imperfect, and the lowness of the houses more conducive to the general health, by allowing a free passage of light and air. As regards this last matter, I cannot but regard with anxiety the present tendency to increase the height of our buildings indefinitely, each wishing to take his own course, regardless of general architectural effect, and of those important sanitary questions of which I have spoken.

Water-supply

In England the attention given to these matters by King Henry illustrates the advancing civilisation of his time, and we find water laid on at the Palace of Westminster by his order. A special favour was in this instance granted by the king to the architect, Edward Fitz Otho, for to him permission was given to have a pipe, the size of a quill, to convey the water from the conduit to his own dwelling-rooms. Towards the close of the century baths were introduced in some of the chief palaces, and conduits of pure water conveyed to the citizens a benefit, which unfortunately they do not always enjoy in our own day.

Drainage.

The drainage of houses was, for a long time, of the simplest description; the water dropped from the eaves of the roof, and open channels carried off, more or less imperfectly, refuse of every description. Underground drainage was known to the Romans, as the splendid remains of the 'cloaca maxima' at Rome abundantly testify; but in England it

does not seem to have been practised before the thirteenth century. As hamlets grew into villages, villages into towns, and towns into cities, the inconvenience of primitive arrangements became manifest, and a more complete system of gutters, pipes, and drains came into prominence. In the Royal Palace of Westminster we find there was an open channel for drainage down the middle of the hall itself. This becoming intolerable, and affecting the health of the courtiers, the king ordered its immediate removal, with other sanitary changes, and, to press the matter, named an early day for the completion of the works, declaring that they must be done, 'even though it should be necessary to hire a thousand workmen a day' for them. An underground drain was provided, in consequence of the king's order, so as to communicate with the Thames, and in the order for payment we find 126*l.* 17*s.* 8½*d.* were expended on the work, which included the repair of the kitchen chimney. The new drain is termed a 'conduit,' and it is stated that the king ordered it to be made 'on account of the stink of the dirty water which was carried through his halls, which was wont to affect the health of the people frequenting the same halls.'

I have brought this particular instance before you, because it seems to show two things: first, the condition of such matters at the time; and, secondly, the reforming spirit which was arising, and which was fostered by the royal example. When king's palaces had open drains in their very halls, you may easily picture to yourselves the condition of humbler dwellings; and, on the other hand, in the complaints which now began to be heard of these primitive contrivances, we discern the advent of that spirit of healthy grumbling which heralds the approach of improvement. In the orders of Henry, and also of Edward I., there are frequent references to such matters, all of which prove that the most enlightened part of the community was becoming convinced that the time was come for an advance on the customs of their predecessors.

Change of style to Early English.

Let us now see what changes have been silently growing up in the forms of architecture since the days of the Normans. The style of the thirteenth century is perhaps best known to most of you by the term Early English, as used by Rickman.

Other names have been given to it, as, for instance, First Pointed, and the style has again been subdivided into epochs; but it is not necessary for my present purpose to trouble you with their refinements, and it will suffice for us now to regard the style which we are considering under its old-fashioned title.

The arches and windows.

You will remember that we found the characteristics of Norman work to be solidity and simplicity, not without considerable richness of surface details. We now find greater lightness, both of effect and of materials used, more deeply cut mouldings, and more elaborate construction. The semicircular arch had given way to the pointed form. Both kinds were used in the same building, until ultimately the latter secured an exclusive predominance. The gain in freedom of construction from the introduction of this feature soon showed itself in the greater extent and beauty of the groinings and vaultings. The favourite shape of windows in domestic work remained, as hitherto, the two-light type, and the opening was frequently divided by a column as in Norman examples. This use of the column is of great antiquity, and is found in Byzantine works; it was commonly used by the architects of the thirteenth century, not only for the openings of windows, but also in the case of doorways, which were frequently divided by a single column, or by a cluster of shafts, as at Southwell Minster and elsewhere. In the case of doorways used by large crowds, this arrangement of a central pier would not be without its convenience, if advantage were taken of it to divide ingress from egress.

The pillars.

It was in the column, however, that the greatest change had taken place. Shafts of moderate size, clustered, and sometimes banded together, now supplied the place of the sturdy Norman pillars, and the traces of classical traditions disappeared from the capitals. Volutes and the square abacus were dispensed with, and a conventional foliage of singular beauty replaced the leaves which evidently recalled memories of the acanthus. The bases, on the other hand, while becoming more elaborate, are not without a resemblance to the Attic base of the Corinthian order. Both bases and capitals were deeply cut with hollows, and these were

divided from the round mouldings by small fillets. The same characteristic marked the arches of the period, and powerful effects of light and shade were freely used.

The dog-tooth ornament.

The most widely known detail of this period is that known as the dog-tooth ornament. It is one of great beauty, and is so well known that I need not describe it. We have already noticed the frequent use of zigzags by the Normans, and there can be little doubt that on them was founded the design of the dog-tooth. It is, in fact, only a double zigzag carved into leaves. It is found in every detail of the time —in arches, capitals, string-courses, corbels, and the like; and in examining ancient buildings it is a good rough-and-ready sign of the period of which we are now treating. In the greater churches more ambitious sculpture now came into use, of which the cathedrals of Lincoln and Wells are splendid examples; and in all the work of the thirteenth century there is evidence of beauty of design and skill of execution, which were not of long duration, and marked out the period as the golden age of English Gothic architecture.

The Lancet windows.

The windows were often combined in groups of two, three, or five lights. The arrangement of three as a triplet, with a longer light in the middle, is the ordinary form, of which we have good examples in London at the Temple Church. Other fine groups, as that known as the 'five sisters' at York, may also be noticed. Window tracery did not come into general use till a later period, although, as we see from the Southwell example, it must have been already known. The windows were for the most part long openings, without mullions, and terminated in a single-pointed arch, sometimes cusped, which has given rise to the name of Lancet. The above are, I think, the principal points to which I need draw your attention, before we proceed to illustrate the architectural differences between the domestic buildings of the thirteenth century and those of the Normans, discussed in my last lecture. The changes I have described are, of course, only the most obvious and salient points of difference, and you will readily notice in your study of examples the many smaller matters of detail which accompanied the more important variations. The style was

complete before the century had far advanced, and its later specimens indicate that a transition had already begun, and that new changes were imminent.

Aydon Castle. Union of castle and hall.

Among the examples of domestic architecture before alluded to, Aydon Castle, in Northumberland, is worth attention. It was not originally termed a castle, but it was intended primarily for a residence, and was called 'Aydon Halle,' thus following the usage which usually prevailed as regarded the manor-houses and residences of the gentry. At the same time, as the building is near to the Scottish frontier, and is situated in the debatable and unsettled Border-land, we may naturally expect to find that capability of defence was not overlooked. It is placed, therefore, on an eminence, with no windows within easy reach, and with those which were necessary few and far between. Battlemented parapets surround the roofs, which provided shelter for the archers in case of need. The house stands in a considerable enclosure, which would serve as a defence to servants and cattle in case of a siege or sudden attack. The nature of the ground protected the enclosure on two sides, and on the others there were ditches at the foot of the enclosing walls.

There is nothing architecturally grand in this example, but it may interest us as a specimen of a fortified house of the Border country. It possesses great strength of construction, and even the mangers in the stables are of stone. It is notable that the fireplaces are here freely used, and no doubt for this circumstance the climate, and the facilities for procuring fuel, may be answerable. These fireplaces are of simple but good design, and in one instance there is a projecting shelf supported on brackets. In this case the fireplace and hearth are built in the thickness of the wall. In another instance, shafted jambs are built against the wall, and project into the room, while over all there is a covering hood, tapering upwards. The chimneys themselves are for the most part carried up singly, in plain solid-looking shafts.

The water is conveyed from the roof by stone gutters behind the parapets, and there are stone projecting shoots, or gurgoyles, to take the water from the gutters outwards. The principal rooms for the family are on the first floor, and

they are approached in the manner usual in castles, by a long flight of external steps, originally covered by a wooden roof, which has now disappeared. The windows to the chief rooms are of the ordinary two-light type, with a dividing column. Each light has a plain pointed arch, and the two openings are surmounted by a pointed arched dripstone, or label moulding. Holes in the masonry around the windows suggest the existence of iron bars, now removed. The window column, though more sturdy in its details than is usual in Early English work, is yet quite distinct in its character, as compared with the Norman feature of the like kind which we saw in the case of the Jew's House at Lincoln. You may compare with interest the greater decoration of the older town residence with the simple but handsome strength of the castellated country mansion of Aydon.

Before quitting the latter, a word may be said about the doorways. The principal entrance at the top of the flight of steps before mentioned is finished with a pointed arch of simple character, with double-splayed jambs. As this entered into a storey of considerable altitude, no question would arise as to the height of the arch, but it was otherwise in cases of more moderate dimensions. It is curious to notice how early our ancestors discovered this difficulty in the employment of the pointed arch, and you will observe in one of the doorways the use of a square lintel, with the upper part of the jamb curving inwards—a design which was capable of much greater development. The same square form was also used for window openings when required, and there is an example of this feature in the same building. The thirteenth-century architects knew that good architecture should be governed by common sense, and while clinging to the pointed arch with the utmost affection, they thus early recognised that there were limits to its reasonable application, and that there is a time and place for everything.

It must, of course, be remembered, in considering the examples of thirteenth-century domestic architecture, that from the nature of the case we are only dealing with houses of importance. The dwellings of the people at large, having been chiefly of wood, have naturally disappeared. If the arrangements of the houses of the rich are to our minds far

from luxurious, we may be sure that the poor had little comfort in their ruder dwellings.

Little Wenham Hall.

We shall find that in the south of England, as well as the north, the houses of the gentry still partook of the nature of castles. Little Wenham Hall, in Suffolk, is a good example of this habit, and it is notable because the materials used are different from those employed at Aydon. Here we find brick walls, built of long narrow tile-bricks of the Roman fashion. The bricks are mixed with stone for windows and dressings. In this part of the country there was not the same necessity to provide for the possibility of a siege that existed in the Border-land of the north. There was therefore no great extent of enclosure-walls, and the plan was in consequence more compact, although with strength enough to resist any isolated attack, whether by pirates or migratory bands of robbers. At Little Wenham Hall, therefore, the sterner features of Aydon are softened and a greater amount of decoration is introduced. Some of the lancet windows have trefoiled heads, and tracery is found in the two-light windows. A turret, at the angle of the tower, contains a newel staircase, and there is a chapel in the tower with some good architectural details and carving. Taken altogether, we find in this southern example a certain progress towards refinement, due probably to the more settled state of the country, and to the somewhat more genial climate. At the same time, the character of a fortified house is well maintained.

West Dean Rectory.

A more domestic-looking relic of the time is to be found in the old Rectory House at West Dean, in Sussex. As this is situated close to the church, it was, no doubt, erected for the use of the clergy, and hence it dispensed with those precautionary measures which were still thought necessary in the manor-houses of the laity. It is a plain and simple building, with a high-pitched roof, but with little or no architectural ornament. The massive square chimney is in the gable, and the roof is covered with slabs of stone, with dripping eaves. There is a good two-light window in the upper story, with a columnar mullion. Each light has a trefoil head, worked above the opening for the casement. The latter is finished square, with a stone lintel. Although there

is not much to interest us in this building, taken by itself, it may serve to show to a greater degree than the other examples what less pretending dwellings of the thirteenth century were like. Even this house, it may be remarked, was of stone, but the features of its design are simple, and just such as might be expected to occur in the more common wooden structures of the period. In it we seem to have a residence of one who from his poverty feared no robber, and whom his sacred character protected from violence. He was therefore enabled to live in a house which was not a fortress, but which might pass for a cottage in our own day.

Domestic chapels.

It need scarcely be pointed out that all houses of importance in the thirteenth century possessed their domestic chapel. The orders of Henry III. are full of minute directions about the 'Queen's Chapels,' in the various Royal residences, detailing what is to be done for their maintenance and decoration, and in some instances ordering the sheriff to supply a chalice, vestments, books, and other necessary ornaments. The custom of the palace was the same as that of the manor-house in this as in other matters, and thus the chapel came to be considered as an almost necessary appendage to private houses of importance throughout the country.

Furniture.

There was not much furniture in the houses of our ancestors, at least in our acceptation of the term. That which was required was, for the most part, made on the spot by the carpenters and workmen of the estate. The windows had stone benches, and there was a dais for the king, or lord; of movable furniture there was little or none; massive fixed tables were common in the hall, and sometimes trestles were used, on which moveable tops were placed for meals. The tops often consisted of boards, roughly fitted to each other, and under these circumstances the phrase to 'board' acquires a special significance. Forms and benches furnished the seats, and possibly served also as couches, the hall being still often used as a dormitory as well as a dining-room.

The king's seat, in important palaces, had usually some importance of design, being of stone or wood, with a canopy, and decorated with carving, painting, and gilding. Move-

able chairs were in occasional but rare use. Curtains may have covered the doors, and also ornamented the royal canopies, but they were not common until a later period. This was doubtless by reason of their cost; for they were evidently well known to the artists who carried out coloured decoration, one of whose favourite subjects was a painted curtain with stiff folds.

With regard to beds there is not much information. Bed-chambers existed, but the provision of them was scanty, even in great houses. Mattresses were, however, in ordinary use, and those of the king were covered with silk, velvet, and embroidery. The people generally appeared to have laid out their mattresses where convenient, instead of placing them in bedsteads, in the modern fashion. The love of linen, which has distinguished careful English housewives to the present time, became early apparent, and the large presses and cupboards were well filled.

Utensils.

The great houses were lighted with candles, and silver candlesticks appear in the inventories of royal goods and chattels. They were, as we know, one of the indispensable ornaments of the altar. Wooden bowls and trenchers sufficed for general use at table, and the meat was often brought to the hall on the spit, fresh from the kitchen fire. Each guest carried his knife, and helped himself, as the spit was brought within reach. Forks were still generally looked upon as luxuries or curiosities, and the meat was cut up by each person on his trencher-board, and eaten with bread. Spoons were used occasionally by the wealthy, and possibly forks also, but the latter were the less common of the two.

Characteristics of thirteenth-century life.

These details of the mode of life in the thirteenth century relate to the habits of the rich, for even kings in those days were without comforts which we now think indispensable for all classes. The mass of the people had to be contented with simpler arrangements and rougher living. This, however, was the time when our English Gothic architecture achieved its greatest perfection. Artistic feeling applied itself in after-times more vigorously to the private wants of men; but these were the days of palaces, abbeys, and churches—of the glories of York, Lincoln, and Salisbury. If the days of such architectural triumphs seem to some of

us to be gone for ever, we may perhaps feel some consolation in the thought that each age has its own special work. The world, as it grows older, takes more and more into account the necessities of its humblest members, and so, in our work of to-day, we may find much to interest and instruct us, though little to be absolutely copied, in the domestic architecture, habits, and ways of the thirteenth century.

LECTURE IV.[1]

DOMESTIC ARCHITECTURE, FOURTEENTH CENTURY.

Transition to the Decorated period.

My last lecture brought down our review of English domestic architecture to the close of the thirteenth century, a time when architecture in general was in a flourishing state in this country. Much of this prosperity was due to the personal influence of King Henry III., who did his best to induce foreign artists to settle in England, and who showed, by every means in his power, his anxiety for the advancement of art. To him succeeded the Edwards; and we will now briefly consider some of the architectural peculiarities of their time. In the old-fashioned nomenclature of the periods of Gothic architecture, the period now under consideration is that which has been called the Decorated, and followed the Early English, which has already been discussed. It is not my wish to enter now into the many peculiarities of transitional work, and the numerous changes which gradually arose, causing each period to melt, so to speak, into its successor. I shall, however, attempt to point out some of the more obvious changes of detail, for the benefit of those students who have not investigated such questions as architects.

Conditions of life in the fourteenth century.

We are now approaching the more prosperous times of English history. Normans and Saxons had grown up together, and had intermarried with each other and with the former inhabitants of the soil. Society was becoming gradually welded together, under the influence of a common faith and a powerful religious system. Peace and prosperity are necessary for the construction of important works of architecture; without peace there is no security to induce men to undertake difficult and lengthened operations; without prosperity there is a want of means to carry such works to a

[1] Delivered on Thursday, March 15, 1877.

conclusion, as, unfortunately for architects, they cannot exercise their art without paymasters. The reign of the first Edward combined these requisites, though they were not as fully secured under his successors. Trade flourished, and wealth multiplied itself. London and the large towns gained in importance, and the communications with the Continent were increased and simplified; while some of the fairest portions of Northern France were among the happiest of the English king's dominions.

Effect of French influence on architecture.

We have seen already that in England the arrangements of our domestic architecture were not very far advanced. In these things the French had the advantage; and the connection between the two countries was not therefore without a considerable influence on the gradual enlargement of English ideas of civilisation and comfort. The manor-houses of the country gentry became more elaborate, as new wants began to make themselves felt. The architectural details were multiplied both in design and decoration. The hall asserted itself more and more as an architectural feature, and domestic offices were provided on a scale hitherto unthought of. Many of these changes were much assisted by French influence, as the great lords from France, who came to attend the English court, brought with them a numerous train of servants and dependents, accustomed to the handsome houses and good beds of their own land.

General progress of domestic as well as ecclesiastical architecture.

Until this period we have had to trace the advance of architecture, as regards public buildings, mainly in its ecclesiastical aspect. The bishops and monks were the chief patrons of architecture, and their comparative security and wealth had enabled them to indulge their tastes at a time when the rest of mankind had mainly to consider how to protect themselves from violence, cold, and hunger. The fourteenth century, however, is marked by progress in domestic as well as in ecclesiastical buildings.

Among the more important houses of the time are the bishop's palaces. The bishop was not only an ecclesiastical, but also a secular prince, and his residence was accordingly on a large scale. Such remains as those at Wells, Norwich, and Lincoln suffice to enable us to appreciate the state which was kept up by the bishops. Nor were the nobility behind-

hand. At Penshurst we find a structure of almost royal magnificence, of which part indeed belonged to later times, but the most important portion, the hall, was erected in the Edwardian era.

Causes of the development of the country-house in England.

It was at this period that English country-houses multiplied, and domestic wants began to be there carefully considered. It was otherwise in France, where the best examples of the architecture of the day must be looked for in towns. This has been accounted for by the more disturbed state of the country districts of France, as compared with England, at the moment. France, moreover, from its geographical position, was more accessible to the influence which Rome and Italian civilisation brought to bear on art. England was a far-off land—an island separated from other countries by stormy seas, and not readily approached either in peace or war.

Apart, however, altogether from differences of national condition, the divergence of customs may, I think, be referred to a cause lying deeper in national tendencies. In England these tendencies have always pointed to country life and its pursuits. In France the great towns have been looked upon as the central rallying-points of society. The latter have therefore received the fostering care of governments and individuals, and have called upon art, and especially architecture, to lavish its resources for their adornment. In England the case has been different. Many of our large towns have suddenly arisen, because coal and iron were found near to them, and they were needed, as centres of manufacturing industry. London, as the capital, might have been expected to have occupied a different position, and it has doubtless done so to some extent. But the taste for field sports and a country life, and the care of great estates, have always induced the English aristocracy to give the capital a smaller share of their affections than they accord to their stately provincial homes; and even now it is difficult to arouse in them any enthusiasm for metropolitan improvements. Hence London, with natural advantages almost unrivalled, has until lately been the ugliest of modern capitals, and though much has been recently done for its improvement, there is still a grand field for the reformer.

In the fourteenth century town-houses were still con-

The materials employed.

structed, as a rule, of wood, and they have consequently perished by fire or decay. In the country stone was more readily accessible, and great buildings were erected near to the stone-quarries. Of course there were many wooden buildings also in the country, and some of these remain to us; but the majority have passed away, and we shall find our inquiries much restricted, in consequence, to buildings of masonry. These were built in a solid manner, with walls from 3 ft. to 4 ft. thick, with buttresses and turrets. The roofs were of high pitch, having substantial and ample timbers. They were occasionally covered with wooden shingles or thatch, but the more permanent protection of slate, stone, or tiles was now ordinarily adopted.

The great hall.

As regards the general plan, we find the great hall still supreme. This feature has been handed down from generation to generation from the days of the Romans, whose Atrium, covered to suit the climate, had set the fashion to their successors. The successive improvements in architecture had added to the importance of the hall. At first narrow, or, when wide, divided by columns, it now became a spacious and lofty apartment, the whole height of the building, as at Penshurst. Wings were thrown out from it, for the accommodation of the family, and towers were added for protection, and also for grandeur of architectural effect. Minor offices and stables were grouped around it, and at the sides, and a gatehouse placed opposite; so that the whole group of buildings formed a quadrangle of some regularity, in which the chapel was not forgotten.

The enclosure and moat.

Protection was afforded by enclosing walls and turrets, and in some instances by moats. At Penshurst the enclosure was large, to afford space for the retainers and guests of the owner, and there was a wall with a moat outside. At Ightham, at Hever Castle in Kent, at Helmingham in Suffolk, and in other places, the moat closely surrounds the house, washes its walls, and is spanned by bridges to the principal entrance.

The tower.

A tower, attached to Mediæval houses, was a mark of rank; and it was sometimes built separate, and of greater strength than the rest of the building. The towers may have been used as places of refuge, or depositories for valu-

able goods and records, in case of sudden tumult. In the northern districts, towards Scotland, which were exposed to the frequent raids of turbulent neighbours, the towers were of greater importance, and even gave the name to the whole structure. The tower, which in the Border counties was called the 'Peel tower,' was in fact the rallying-point of the district in case of need, and the inhabitants could shut themselves up in it for a time, until any pressing danger were past. In such places the idea of a tower gave a great feeling of security, and there are good examples of houses, built of several stories in height, forming a tower with flanking turrets, and protected by a moat at the foot of the walls. One of them is to be seen in the case of Dacre Castle in Cumberland.

The general arrangement.

With certain varieties, due to local causes, the gentlemen's houses of this period followed a general plan in their arrangement. We find, as the usual type, the hall and enclosure, with kitchen and other offices in it, mostly built of wood; a cellar, or chamber, under the hall, and a solar, or bed-chamber, on an upper floor, for the family. Sometimes a dungeon is added, with a guard-room for soldiers, and other rooms according to the importance of the owner of the building. In unsettled districts the ground-floor is massive, and little pierced with windows, and when the latter exist they are often mere loopholes. Stone staircases were introduced, with newels, and windows and fireplaces were common in all private rooms. External stairs, which formed the principal means of approach in the Norman castles, were not suited to the more domestic style now becoming common, and were gradually laid aside in favour of internal staircases. The principal doorway, in cases where the house was surrounded by a moat, was approached by a drawbridge, and defended by a portcullis, much as we see at the present time in fortified towns abroad. Protection from casual external violence was still a question of great importance: but the advance of civilisation was by degrees bringing into greater prominence the more settled and domestic influences of family life, and these soon acted powerfully on the architecture of the day.

In towns the houses did not need to be castles. The

Town houses.

walls, ditches, gates, and battlements surrounding each important city, enabled the citizens to erect their houses and carry on their business in a feeling of security. Their buildings were consequently made, as we have already seen, of more flimsy materials than the country houses of the gentry, and, as a consequence, our knowledge of them is less. In some of the old towns of France, however, we find very interesting remains of timber houses, and those which are still left in England, even if they were mostly erected at a later date, are obviously built after the ancient manner.

In most cases there was a high-pitched gable to the street, with stories projecting, one over another. The gables were often ornamented with carved or traceried barge-boards. The chimneys in town houses were commonly built in inside walls, and terminated in cylindrical shafts. The windows were protected at night by external shutters, which were often hinged to the transom of the window, so as to admit of being pushed open from the bottom, and thus served to protect the opening from sun or rain in the daytime. At the time we are considering, coal was largely introduced into our towns, and became the ordinary fuel of the citizens, although at first much objected to by them on the score of the dirt and disfigurement of the buildings which it caused. With them, however, as with us, the advantages and convenience of coal outweighed these objections, and it soon became an important article of commerce, and of daily domestic use. External painting was adopted as a means of preserving cleanliness, and the Flemish habit of decorating their houses with bright colours was partially used in England. It has been already noticed that in the time of Henry III. polychromy of an elaborate character was practised, and we may therefore conclude that the houses of the great in the fourteenth century were ornamented in a similar manner.

Habits of life.

Looking at the general character of the time, we shall find that there had been a general advance in comfort and refinement, although in these matters our ancestors were still far behind the notions of the present day. The rich were beginning to gain from the experience of others, but the poor were still much as before, with rude and simple accommodation in their dwellings. The feasting in the hall

was marked by a coarse profusion, and the apartment was frequently used as a dormitory as well as a dining-hall. The fire was still in the middle of the room, and a louvre, in the roof over it, formed its chimney. The furniture consisted of the necessary tables and benches, and any addition to these was for the high table only, placed on its dais of one or two steps. From the upper end of the hall the lord and his party could withdraw into his private chamber, or solar, which sometimes overlooked the hall, by means of a small window. A music gallery was occasionally found, generally placed over the entrance corridor.

Specimen of Mediæval halls.

We have fortunately so many Mediæval halls remaining in this country that we experience no difficulty in understanding these arrangements, most of which have continued unaltered to the present day, and as the custom of dining in hall was tenaciously upheld, there is little difference between buildings of various dates, excepting as to the actual details of their architecture. Thus, we have in London a fine example of a hall at the Middle Temple, which, though of later date, is consistent in its plan and general design with all that we know of the halls of the fourteenth century. At Oxford and Cambridge, also, there are numerous and striking specimens of this important portion of a Mediæval house. The roofs were usually of timber, cleverly constructed, and sometimes richly decorated with carving, and also painted and gilded. In some rare cases stone arches were adopted instead of wooden trusses. This is the case at Mayfield, in Sussex, then a country seat of the Archbishop of Canterbury; and there is a similar feature at Ightham Moat, Kent, before referred to. An arch of solid timber was also a favourite expedient, and this sometimes sprang from columns, as at Nursted Court, Kent. In other examples the walls were connected with tie-beams, which prevented the arched principals from thrusting out the walls. At Nursted this object is ingeniously attained by the horizontal beams, which extend from the walls to the feet of the arched principals, upon the capital of the columns. We may see in this arrangement the germ of the idea which was afterwards to expand into the daring designs of hammer-beam trusses, as in the present roof of Westminster Hall.

Mayfield Hall.

At Mayfield the hall was large, and handsome in its architectural features, as befitted the palace of an archbishop given to hospitality, according to the custom and traditions of his high office. The dimensions were about 70 ft. in length and 40 ft. in width, and there were numerous rooms in connection with the hall, which have now fallen into decay. The exterior shows strong buttresses, which were necessary to resist the thrust of the arches of the roof. These arches are of stone, springing from carved corbels, and are themselves handsomely moulded. They are, of course, pointed in form, as at the time of their erection the semicircular arch was no longer used. There are no remains of the timber roof which connected the arches and covered in the hall. It was probably boarded internally, and enriched by coloured decoration. The Mayfield hall may serve to give some notion of the style of the great houses of the time. Its details, whether of windows, doorways, or other features, are all of considerable beauty, and serve to indicate the importance of the primates, Mayfield being one of their favourite residences. The whole property was seized by Henry VIII. at the time of the Reformation, since which period it has been altogether alienated from the see of Canterbury.

The windows of the period.

We may notice in the halls of this period a change which has taken place in the windows, enlarging their usefulness and increasing their architectural effect. Tracery having been by this time heartily adopted by the architects of the day, naturally found a place in domestic as well as in church architecture. As the halls gained in height, the windows were naturally lengthened, and the plain lancet openings increased in size and height. The next step was therefore to divide them, not only vertically, but also horizontally. The two-light window remained, as before, the ordinary type in domestic work; but the massive central jamb and column disappeared, and were replaced by a mullion of moderate dimensions of section. The height, which would otherwise have been inconvenient, was bisected by a transom with tracery; and the form of window thus created became common in the architecture of the day. The inner jambs and mullions were decorated with attached columns and mouldings, in a variety of ways, and the general design, as de-

scribed, was so commonly adhered to, that we expect to find it, almost as a matter of course, in the secular buildings of this period. It may be repeated here, that in such cases the inner cill, which in modern language is called the window back, was not sloped as we see it in our cathedrals and churches, but was worked flat, so as to serve for a seat. Glazing was still expensive and rare, and it was often applied in casements, which appear to have been capable of removal, so that their places might be occupied by wooden shutters when the lord and his family were absent. As stained glass was now in constant use in the churches, we may suppose that it was not unknown in other buildings; but it must have been sparingly used, and there is little to guide us on this subject. Shutters were still common, both for security and for keeping out the cold, the latter being, we may be sure, no unimportant consideration in lofty halls, such as Penshurst and Mayfield. The fire in the middle of the room was often the only effectual means of warming; and for this reason, doubtless, it continued to be placed in the centre of the greater halls, long after chimneys and hearths were constructed in the walls of the private apartments.

Panelling and wall decoration.

Greater comfort was sought by the introduction of wooden panelling on the side walls, and above the woodwork there was ample scope for the art of the painter, who was busy now, as we have seen was the case in the preceding century.

Tapestry.

Wall painting, however, soon encountered a powerful rival in the introduction of tapestry. This was due probably, in the first place, to foreign influence, as may be inferred indeed from the name of Arras. At first of great cost, tapestry was used only for places of special importance, as for the hangings to the king's throne, or the back of the dais in the halls of the nobles. In churches such hangings had long been familiar. After a time, as the demand increased, the tapestries required were made in this country, although importation from abroad still continued, particularly in the case of the rarer and more costly stuffs. London and Norwich were the chief seats in England of this manufacture, but it was also carried on in other towns. The tapestries were embroidered with numerous devices, with figures and representations of animals, such as leopards, eagles, griffins, and the

like. The material was usually worsted, although richer stuffs were adopted on great occasions, and silk and velvet were not uncommon, particularly in France. One reason why tapestries became popular was that they could be easily removed. A great personage, when travelling in those days, took with him the greater part of his goods and furniture. Beds were, as a matter of course, carried in his train, and by taking with him the tapestries which covered the walls of the rooms, much was added to the comfort of the traveller at the various resting-places on the road. Froissart says that the houses of the period were 'hung with tapestries representing various scenes and histories, to the delight of all beholders.' This must have applied, at least in England, chiefly to the private chambers and bedrooms.

Furniture of the hall.

The halls were more commonly wainscoted with panelling, which in later times extended frequently to the ceiling. Against this panelling the benches were placed when not in use at table, and from this custom arose hereafter the common practice of constructing fixed benches against the walls, as a part of the dado or wainscot. The benches served as couches at night in cases when the hall was still used as a dormitory, and the early habits of our ancestors favoured this arrangement. The dinner was early, being served before midday, and there was a supper about five o'clock. These two repasts were the principal meals of the day, and it is curious to note that they accord with the practice of our French neighbours at the present time. The dinner was often an occasion for state and pageantry, and in such cases it was protracted until a late hour, and was accompanied by music, followed by revels, masking, and minstrelsy.

Plate.

In important halls there is commonly a recess, or bay window, near to the high table, where the plate could be displayed. The skill of the Mediæval goldsmiths was great, and the principal noblemen delighted to possess rare and beautiful objects in the precious metals. These precious things they carried about with them from place to place, not caring, probably, by leaving them at home, to put too much temptation in the way of the roving bands which still infested many of the country districts. Plate was for ornament chiefly, as only the very rich could use it habitually.

Pewter and wooden platters and drinking-horns were the utensils commonly seen on the dining-tables. The great salt-cellar was, however, always a conspicuous object, and the position of a guest in relation to it determined his precedence, and the favour he enjoyed with the lord of the feast. Great ingenuity and variety were introduced into the design of this important item of the furniture of the table. The older forms were generally those of massive cups, but these were succeeded by more fantastic shapes of animals, buildings, and the like. Another peculiar vessel was the ship, which contained spices and sweetmeats, the form of which may have been intended to suggest the foreign origin of many of these delicacies. The design of these ships was followed in later days by the makers of porcelain, and some of their works modelled on the old design have been highly esteemed by collectors in modern times.

The habits at Mediæval dining-tables were significant of good fellowship rather than refinement. The wassail bowl went round for general use, and the food was taken in the fingers, and cut with the knife which each man carried with him. Knives and forks only came gradually into use as wealth increased, and they then made their way downwards from the tables of the great to those of the merchant and middle class. The great ewers with rose-water, with which we are familiar at City banquets, are the successors of those which were made in early times, and some of them are of considerable antiquity. The custom was not without its advantages, and indeed necessity, considering the mode of eating which has been described. In the fourteenth century, to eat off the same board and to drink out of the same cup was considered a special honour conferred by the lord on his inferior. It is shadowed forth by the custom, which still lingers amongst us, of the 'loving cup,' and of 'taking wine' with each other at table, the latter of which, as a sign of friendly hospitality, has only of late, and to the regret of many, come to be disused.

The habits of the table.

In some of the manuscripts of the period we find interesting representations of the great dinners of the day. The lord on the dais, under his canopy, with his wife at his side, is surrounded by his guests, neighbours, and dependents.

Contemporary representations of the common feasts.

The high table, occupied on three sides only, is ornamented with costly plate. The chaplain is there to say grace and ask a blessing on the feast. Minstrels and troubadours are ready to contribute their efforts to soothe, please, or excite, when called upon; and last, though not least, the fool or jester was at hand, with his jokes and wit, often of a questionable nature, to rouse the laughter and hearty mirth which we may suppose to have been characteristic of times which have handed down to us the name of our country as 'Merrye Englande.'

The traces of these still remaining.

The more private life of the nineteenth century does not favour these habits; but they are not altogether extinct at our public dinners, as, for example, the annual banquet of the Lord Mayor at the Guildhall, where many of the old customs are carefully maintained, having been handed down from generation to generation. One of them prescribes that the master of horse, or postilion, should always be at the right hand of the Lord Mayor, booted and spurred, with whip in hand, ready to conduct his master wherever State exigencies may require his presence. The habit of dining together in a public manner was common in the religious houses, and it naturally became the rule with other corporations, such as the great trade guilds, which were the foundation of our City Companies. It was likewise the fashion of the Court, and the great nobles therefore followed suit. It is a distinctive trait of Gothic as opposed to Latin civilisation. We find no traces of it in our examination of Pompeian and Roman houses. In them the dining-rooms, or triclinia, were small; and even in the later times of the falling Empire the object of the Roman host was the fastidious and elegant enjoyment of the few, rather than a hospitality extended to a numerous company, such as that which we have been describing.

It will readily be understood, from a consideration of the ordinary life of Mediæval times, why the hall was so important, architecturally, in our great houses; and we may have to notice by-and-by that the importance of the hall began to wane, as the old system of hospitality came to be abandoned in favour of the more exclusive habits of modern days. The hall is now, as we know, an appendage only to the houses

of the wealthy, and forms no longer a necessary and integral part of the structure.

The chapel.

In passing from the hall to examine the other portions of the Domestic architecture of the fourteenth-century manor-house, mansion, or palace, we naturally come first to the chapel, which was seldom far from the hall, and often connected with it by means of a passage or cloister. The architecture of the chapel was in accordance with the usual church-building designs of the time. The east window had usually three, and occasionally a greater number of lights, in contradistinction to the dual arrangement typical of Domestic work. The altar was placed beneath the window. It was commonly of stone, and was sometimes formed of a projecting shelf of that material, and furnished with hangings. The usual arrangements of piscina, sedilia, and a receptacle for plate, were generally provided. The lord's seat, or 'pew,' as it came afterwards to be called, was often on an upper floor, looking into the chapel from a higher level. Sometimes a screen divided the chapel into two parts, leaving the eastern space the whole height of the room, and dividing the western end into two heights, in which case the lower floor was used by the household and the upper floor by the family. In important cases there existed an antechapel, over which the lord's pew was placed, and this arrangement lasted until a late period.

The chapel was ordinarily a room in the house, though sometimes it occupied a wing or tower, and more seldom was contained in a detached building in the quadrangle or courtyard. Attached to it were priests' chambers for the use of the chaplain, whether resident or otherwise. When there was no resident chaplain, the chapel was frequently served by a friar from a neighbouring monastery.

Its relation to the parish church.

The parochial clergy looked with a certain jealousy on private chapels. They were at first a necessity, from the state of the country and the distance apart from the parish churches: but as the latter came to be multiplied, the clergy attached to them not unnaturally wished to see the neighbours attend their own ministrations, and when application was made to the monasteries for clerical service, the old and never-dying jealousy between the regular and the parochial

clergy was ever ready to break out. In the case of Crook Hall, Durham, the licence for the chapel still exists. It was issued by the bishop, and, in order to maintain his power of control, it required renewal from year to year. Moreover, certain conditions were attached to the licence, and by them it was provided that the chapel was for private use only. The lord and his family were not to absent themselves from their parish church, but must attend the same, at least on the greater festivals and on the day of dedication. All offerings were also to be made at the parish church, none being allowed in the private chapel of the hall.

The Oriel.

The room over the western end of the chapel was often connected with the principal chamber. It had usually a fireplace, and could be shut off from the chapel by curtains, and in later times by casements, so that it might be used for purposes unconnected with the chapel or with divine service. It has been called the Oriel or Oriole, a name frequently mentioned in the records of the time, but as to the exact meaning of which some doubt has existed.

Chimneys.

As we now find numerous fireplaces in domestic architecture, the chimneys naturally became an important feature in external effect. No great changes were introduced in the forms of the fireplaces themselves. They continued to be, as before, corbelled out from the walls, with projecting hoods above them, more or less ornamentally treated. Such fireplaces are found in private rooms and in halls of moderate size. In the larger examples the older fashion of a central fire was still followed, as has already been said. Externally, the greater frequency of chimneys led the builders to tax their ingenuity as to their forms. The older shapes of square or cylindrical shafts became more varied and complicated, and chimneys were grouped together, carved, moulded, or otherwise ornamented. Where they were carried up singly, they were frequently made octagonal in plan, and were finished in the upper part with gablets, battlements, and conical tops. In some cases carving was freely introduced, and the chimney became an important architectural detail, and continued to be so until Elizabethan days.

At present chimneys are one of the architect's greatest difficulties in large towns, as from the way in which buildings

of different heights are crowded together, and from the general use of coal, the disposal of the smoke is often a problem not easy to solve, while its effect on our architecture is deplorable. Our ancestors appear to have been free from these troubles, and their records do not, so far as I am aware, contain any mention of the profession of chimney doctors.

Bedchamber and furniture.

As fireplaces were now common, the chambers had an amount of comfort not previously attained, and the bedrooms, in particular, were much improved both in structure and furniture. As to the latter, beds and canopies were provided, and even baths. In rare cases, carpets for the floor began to appear, and there was a great advance in elegance and luxury. As a consequence, probably, of these changes, iron bars and bolts were found necessary for the protection of doors and windows, and many of these articles are very elaborate and beautiful; as, for example, the foliated hinges, often covering the whole surface of the door, which it thus protected and ornamented at the same time. Complicated and well-designed locks and bolts were also added, and in these things, and in grilles for windows, the English workmen showed great talent and skill.

Offices.

While the family rooms were gaining in importance, the domestic offices naturally became sharers in the current improvements. In the tower-like houses the offices were either included in the central building, or provided for in wooden sheds, which could be abandoned on the approach of an enemy. In the more ordinary type of building, however, the kitchen, surrounded by its necessary adjuncts, was a separate structure, and formed one side, or even two sides, of the quadrangle. The offices were necessarily extensive, for there were no purveyors to bring food to the door, and everything was provided from the estate. Corn had to be ground and made into bread; meat to be killed as well as cooked; and farmyards, stables, pigstyes, &c., had all to be arranged.

The abbot's kitchen at Glastonbury and Durham.

The famous abbot's kitchen at Glastonbury will give you an idea of the spaciousness, and even of the architectural magnificence, which the Mediæval kitchen could assume; and the abbot's kitchen at Durham is little inferior to it, and is of an earlier date. In the latter example the fireplaces are placed round the walls of the interior, which is

octangular on plan, and groined with stone. There is a central opening in the roof for ventilation. In large houses there were two or more kitchens, as there were also great and small halls, and in cases of exceptional magnificence of hospitality, the kitchens were supplemented by temporary structures, and even by cooking in the open air. In connection with the kitchen were the buttery and pantry, generally near to the hall, as may be seen in examples at Oxford, Cambridge, and elsewhere.

Changes in architectural style.

The principal domestic arrangements having now been glanced at, it only remains to point out the changes which had arisen in the architecture of the period, some of which have been already indicated. These changes, as I have before explained, apply more or less to all buildings. The separation of domestic and church architecture is a modern device, and belongs to an unprogressive age in architecture. In Mediæval times no one doubted the excellence of the style of the day, and, as a consequence, there was no hesitation in applying it to all buildings, whatever their purpose. Let us see, therefore, what were the chief characteristics of the architecture of the fourteenth century.

The 'Decorated' style.

Although it is convenient to retain the names which Rickman and others have adopted for the differing styles of Gothic in this country, we must admit that the title of 'Decorated' is somewhat misleading. It may perhaps admit of some justification if we consider isolated details; but as regards architectural decoration, whether of the mass or of the ornaments of a building, there was little to add to the perfection of many of the monuments of the preceding century, as you may see in the cases of Salisbury and Lincoln, to which I have before referred. Moreover, if surface decoration be considered, we find admirable examples in earlier times in the richly carved Norman doorways; though in such cases the execution is rude, and the architect relied for effect on the decorated aspect of the mass, with its concentric rings of enriched mouldings.

The elaborate doorways.

Closely allied with the Byzantine and the Continental Romanesque schools, those elaborate doorways foreshadow the principles on which the architects of successive centuries worked, more especially in France, where the passion for

deeply recessed and highly ornamented portals was always more strongly pronounced than in our own country. With us such doorways were perhaps at their best in the fourteenth century. The jambs were ornamented with numerous shafts, having carved capitals and well-moulded bases, while the mouldings above were beautifully carved, the sculpture being in many respects more imitative of nature and natural objects than it had been in Early English examples. There was, however, little of that direct imitation of such things which some extol as the perfection of art, and desire to see in our works of to-day; for the Mediæval architects knew that architecture is a conventional art too well to fall into such snares. We have seen that in the thirteenth century the dog-tooth ornament may serve as a distinguishing mark, and we now find a similar test detail in the ball-flower, used freely in what is called Decorated work. We find it in arches, cornices, and corbels, and windows, either in its simplest form or highly enriched, and with connecting stems or bands of foliage.

In the great examples of French doorways the love of detail has perhaps somewhat overpowered that law of common sense to which architecture must bow; for, when we approach one of them, as, for example, the western doorways of Rheims or Amiens cathedrals, it is found that the exceeding richness which captivates at a distance, is to a great extent due to the introduction of niches, figures, and canopies, following the curve of the arch, an arrangement apt to cause uncomfortable reflections as to what may possibly happen to figures placed in such a position of unstable equilibrium. We have examples of this mode of decoration at home, but in most cases with us the niches and figures are on a smaller scale than in the French examples, and are suggestive rather of a moulding enriched than of any constructional fancifulness or extravagance.

Changes in ornaments, mouldings, and shafts.

In tracing the variations of Mediæval styles we do not expect to find any startling novelties; the workmen knew but one manner of working, and though a gradual change or improvement grew up, as it were, under their hands, they were not troubled by any outcry for a new style. It thus happens that in Decorated work the general forms of arches

and doorways are little altered from those which were previously adopted, and it is chiefly in details that any change made itself felt. At first the dog-tooth was used in connection with the ball-flower; afterwards it gave way to a carved flower or patera of four leaves, based evidently on the old design. The mouldings became at the same time bolder in section and of larger size, while retaining much of the general character of the preceding style.

The columns, which in small and unimportant works are circular or octagonal on plan, continued in the cathedrals and great churches to be designed in clusters; but the shafts of such clustered columns were more essentially a part of the structure than had been formerly the case. Thus, in some fine examples, as at Exeter Cathedral, the effect of the pier with its clustered shafts is that of one massive column, enriched by vertical mouldings; while in the choir at Westminster Abbey, on the other hand, we see separate shafts gathered around a large central column, which is obviously the support relied upon to sustain the superstructure. There is little doubt, I think, that the fourteenth century manner is that which is most consonant with sound principles. However beautiful the clusters of separate columns may be in themselves, there is an anomaly in dividing vertically a pier which has to support a great weight, and there is a further constructional disadvantage in building such a pier of different materials, as marble and stone, which vary in their hardness and power to support superincumbent weight.

In the piers which were in use in the Decorated period, this feeling would seem to have had its influence, as the use of applied columns was rare, with exceptions in the case of such details as wall arcades; and the shafts were, as a rule, an integral part of the structure, and worked out of the same stone as the mouldings. We miss also the free application of the single shaft, as seen, for example, in windows such as those at the Temple Church, London, where the inner arches of the windows are carried on single shafts. In the Decorated window the shaft was reduced in importance, and became, as in the case of the piers, a part of the actual construction. Not that it disappeared, although

many windows were designed without it. The shaft, with its capital and base, was too beautiful a detail to be readily laid aside, and we consequently find that it was abundantly employed in piers, mullions, jambs, and niches, subject in most cases to the modifications to which I have referred.

Windows and window tracery.

We have next to notice the development of windows and window tracery. A powerful influence on this development was found in the improvement of the manufacture of glass, and the consequent introduction of coloured windows. How powerful this influence became we may see by the examples of the great churches of France, the country which took the lead in the matter. Here we find the windows growing in size and numbers, until solidity of construction appeared to be seriously jeopardised. Exaggerated clearstories became masses of painted glass, with scanty divisions of stone bars, and stability was provided for, not always satisfactorily, by the hidden expedients of buttresses, flying and otherwise. In England our architects steered clear for the most part of this exaggeration, although we are not without examples of the application of the same ideas, as at Gloucester Cathedral in the great east window, which, however, belongs to a later date than that which we have now under review.

The Decorated windows were features of great importance in the architecture of the time. Beginning with the simple arches, trefoils, &c., inherited from the previous era, the window tracery became more elaborate, and gave opportunities for complicated design. This reached its climax in the flowing or Flamboyant style, which is probably the most ingenious manner of filling an arched window opening that has ever been devised. This tracery has, however, the defect of appearing too clearly as constructed ornament rather than ornamented construction; and there was ever a tendency to allow the fancy to run riot, and to set the dictates of good sense at defiance, by the adoption of forms remarkable rather for their quaintness and fantastic appearance, than for beauty of form and propriety of detail. The well-known Jesse window at Dorchester, in Oxfordshire, is an illustration of my meaning in this respect. In it the constructional requirements are sacrificed to an exuberance of detail, which, being placed against the light, is in an

unfavourable position, and one, moreover, which is unnecessary on artistic grounds, because the same story might have been told better by sculpture applied in other parts of the building. For examples of flowing tracery of a more self-restrained description I may refer you to the east window at Carlisle and the great west window of York Minster. While admitting the ingenuity and often beauty of such designs, I cannot but regard with greater admiration the noble simplicity and striking solidity of the lancet form, especially when enriched with the shafts and beautiful mouldings of Early English art.

Summary of results.

I do not propose to trouble you, as I have said before, with all the minor details of differences between the styles, but I have, I hope, said enough to enable those of you who are not architects to distinguish between them. It only remains, therefore, to sum up the facts which we have ascertained to bear upon the domestic architecture of the fourteenth century.

We find, in the first place, a considerable advance in the requirements of social life, leading, as a direct consequence, to an increased development of architecture. Such development was found to consist to a great extent in the addition of extra features to the time-honoured types—a mode of proceeding in strict accordance with the genius of the English people.

Further, it has appeared that in early times, as at the present day, the country was the natural home of the English gentlemen, who delighted to expend their resources there, in the improvement of their estates and the exercise of a bounteous hospitality, rather than to crowd into cities, and to vie in magnificence with their foreign contemporaries. We have further concluded that our architecture was controlled by circumstances of position, by the materials attainable, by the state of the country as regards security, and by other similar external considerations.

Subject to these limitations, the architecture was reasonable. Beauty was realised, but not at the expense of convenience, as then understood; and any object sought to be attained was attempted in the simplest and most natural way. It is our task—a task both of honour and difficulty—to seek to apply similar principles to the architecture of to-day.

LECTURE V.[1]

FIFTEENTH CENTURY.—OLD LONDON.

HAVING now traced the gradual advance of English domestic architecture through the Saxon and Norman, the Early English and the Decorated varieties, we are approaching a less typical period. The remains of the fifteenth or succeeding centuries are not indeed wanting in high interest, and often great magnificence, but they do not speak to us quite so emphatically of increasing civilisation and its consequent social changes. The great mansions of the country gentry were still palaces; and, although they became more domestic in their details, they differed in degree rather than in kind from those which preceded them.

The Decorated has been said to be the only complete style of English Mediæval architecture, but that which is termed the Perpendicular is perhaps more English than any other. It possesses great advantages for domestic work, which have perhaps not been always sufficiently appreciated by modern revivalists. The pointed arch was exquisite in proportion and beauty for the simple requirements of ecclesiastical design; but as the domestic wants of the day increased, a more plastic method of building became a necessity, and this was found in the flat-arched style, which we call Perpendicular or Tudor. There are many examples of the application of this development in house-building; and Crosby Hall in the City is a good specimen, easily accessible to you, of a merchant's town residence. Many farm-houses in various parts of the country still contain remains, more or less perfect, of this style, although the number of them is daily being lessened. For after the dissolution of the religious houses and the appropriation of their property, the

The 'Perpendicular style.

[1] Delivered on Monday, March 19, 1877.

splendid palaces of abbots and bishops became manor-houses or private gentlemen's residences; and these have in numerous cases degenerated into farm-houses. In them the appearance of fortification was still often kept up, but evidently more from association, or perhaps for ornament, than for use or from necessity. The parapets were battlemented, but the windows were enlarged, the entrance was in the lower floor, and height was attained by the erection of several stories.

Greater distinction between ecclesiastical and domestic architecture.

The architectural features followed generally the changes which were beginning to show themselves in the cathedrals and churches; but there is now a distinct difference perceivable between domestic and ecclesiastical buildings, inasmuch as the arch was frequently laid aside in the former class, and a more horizontal treatment adopted. Not that the Perpendicular had ceased to be still an arched style; but in house-building, windows and panelling reduced the arch to a comparatively secondary position, by the prominence given to the horizontal features of the design, particularly in the later or Tudor phase of the style.

Arches.

In the work of the Perpendicular period generally the arches and the windows are the most characteristic details, or at least those which will strike first the ordinary observer. The pointed arch had given way to the depressed or four-centred form, which is known among us as the Tudor arch. Introduced gradually, this feature became at last almost universally used. In doorways it was framed in, as it were, by the label or dripstone, which had become an enlarged and more important feature than before. Hitherto the label had followed the curve of the arch, and served as a protection to it. It now frequently formed a square head over the arch, with spandrels filled with tracery or carving. The ogee form also, which was sparingly used in the preceding style, became a favourite feature, and was used freely, with crockets and finials often richly carved. The arches, in fact, now assumed a greater variety of form than at any previous period.

Windows and panelling.

The windows were large, with numerous lights, and as a rule, when of considerable height, divided by horizontal transoms. The heads were filled with tracery as before, but the character of this tracery was altered. The circles, quatre-

foils, and the like, as well as the more flowing patterns, had disappeared, and perpendicular lines prevailed. In some instances these ran from the cill to the arch, the curves of which were generally reproduced in the minor divisions of the tracery, and in all cases the windows exhibited the prevalence of vertical lines. Another peculiarity of the time was the plentiful use of panelling. The surfaces of the walls and buttresses were profusely decorated in this manner. The panels followed the same general design as the windows, and many of them in consequence appear like windows blocked up. They were often subdivided again and again, till they became crowded and very elaborate, as you may see at Henry VII.'s Chapel at Westminster.

Mouldings and carving.

The mouldings are few and shallow, very different from the varied, deeply cut, and richly ornamented clusters of previous styles; and the carving is of a less varied and interesting character. The rose of the Tudors is frequently introduced, as well as the portcullis of Henry VII., and the oak and strawberry leaves become favourite ornaments, carved in a mixed spirit of natural and conventional treatment.

Pinnacles and roofs.

Pinnacles and turrets were common, and the latter assumed the ogee form of roof which we see at King's College Chapel, Cambridge, and at Henry VII.'s Chapel at Westminster. Towers were built of great magnificence, as at St. Mary's, Taunton; and roofs became lower of pitch, and surrounded by parapets, battlemented, panelled, or both. Roofs were constructed of wood, often richly carved and ornamented with bosses, and the peculiar system of vaulting known as fan-groining was used in important structures, as, for example, in the two chapels I have just mentioned, and at St. George's, Windsor. This method of design is distinctively English, and has special beauties, although I think it cannot be said to rival the earlier vaults for purity and severity of style.

Adaptations to domestic architecture.

The Perpendicular style, in fact, was losing these qualities in all its details, which were conceived in a spirit rather of freedom and exuberance, than of dignity and lofty elevation. In its application to domestic work it was more successful than in other cases. Here freedom stood it in

good stead, and gave to it a susceptibility for decoration which fitted it for any amount of magnificence that might be desired. At the same time the simplicity of the mouldings reduced necessary outlay. Thus, there was found no difficulty in applying Tudor forms to every variety of building, from the castle or palace to the farm-house. The castle, indeed, in the stricter application of the word, was becoming an anachronism, and castellated peculiarities inconvenient. Old customs and precedents, however, still dictated the plans of buildings and the distribution of their adjuncts. The fortifications were abandoned or became mere architectural ornaments; the walls of enclosure, within which might be gathered hosts of retainers, soldiers, or tenants, were no longer necessary. These outer boundaries, therefore, ceased to be built or maintained; but the inner buildings were still erected as before, with the hall as a central feature, around which the other apartments were grouped.

Diminution of importance of the hall.

Changes arose in this arrangement as time went on, until the hall lost its importance and became merged in the general mass of the building, as in many existing Elizabethan and Jacobean examples. Until now the hall was the chief part of the whole building, to which it gave its name; and it was the result of feudal customs which were in course of gradual modification. The great landowner lived here in state, with his dependents gathered around him, all of whom lived at his expense and looked to his table for their support. After the feast, when the lord and his family withdrew to the solar, or private withdrawing-room, the hall gave shelter to his vassals, by night as by day. They were not in a position to be exacting, having few rights which they could enforce against their lord, and being wholly dependent on his pleasure. The hall was at once the symbol of his state and of their subjection.

We may thus understand that the decline in the importance of the hall marked an important epoch in English social life. It was indeed a sign of the gradual enfranchisement of whole classes. Even the labourers began to live in houses of their own, or at least as tenants of their lord; and there arose also that great middle class which has done so much for England by standing between the Crown

and aristocracy on the one hand and the people on the other, and has thus powerfully influenced our history to the present day. These changes in society soon affected architecture. When there were no longer large numbers of dependents living in the hall, the size and importance of the latter might naturally be diminished, and, instead of being almost the house itself, it shrank into a part of the whole, and became a mere accessory, more or less distinct according to circumstances.

Increase of number and dignity of bed-chambers.

Meanwhile, the other rooms of the manor-house gained in importance. More refined manners demanded consideration. The hall could no longer be allowed to be used for sleeping in at night, and private bedrooms and dormitories were constructed in the larger houses or 'halls.' A common dormitory had long been a familiar arrangement in monastic buildings, and the beds in it were often divided by curtains or boarded partitions. Similar rooms were now placed in the upper stories for the use of servants or guests. Private bedrooms were at the same time multiplied, until they became as important as any other parts of the structure. In later times, indeed, they were decorated with much splendour, and we find to this day some of the most elaborate plaster ceilings of Elizabethan design in the bedrooms of the great houses of that period. Beds with drapery became customary, though they were still often made up on the floor and placed two or three in a room. They were taken about from place to place, and it was incumbent on a servant to find his own bed.

Diminution of outbuildings.

Formerly, the servants in the castle of a great landlord included mechanics of all trades required for the building or maintenance of the structure. There were hosts of armourers, carpenters, masons, smiths, as well as butchers, bakers, and the like. This circumstance will explain the necessity for the numerous buildings which clustered around the castle, and were protected by its enclosing walls. The custom lingered, but gave way before the increasing importance of the industrial arts, and the rise of the guilds and companies of traders to which I have before referred.

The increase of commerce not only led directly to wealth and national prosperity, but it indirectly softened the man-

Houses of middle class. Timber houses.

ners of a rough and hardy people, by acquainting them with the ways and experience of foreign countries. The trading classes were daily gaining in power, both social and political; and not only France and the Low Countries, but even India and the East, gradually poured their treasures into London and the larger towns, which accordingly began to assume a corresponding importance. It was doubtless a distinct advance for the peasant to obtain a roof of his own, although of the humblest nature. Like most of the minor buildings of the time, his house was constructed of wood, with a thatched roof, and too often a single room served for all purposes. Many of the timber houses which we still find in Kent and other counties were obviously intended for the use of persons above the rank of a labourer, such as yeomen or small farmers. As roads were still bad and communication difficult, there was little inducement for the workmen to go far for materials, and both in the country and in the towns wood was still commonly used for house-building. Our ancestors were famous for their carpentry, and their fine church-roofs are unrivalled. In house-building they showed the same skill, combined with much taste for the picturesque. The walls were formed of timbers, and the spaces between them were commonly filled in with plaster, which contrasted agreeably with the colour of the wood. In some counties, as Lancashire and Cheshire, these old timber buildings still abound, and are usually called 'Halls,' a relic of the old fashion. In these cases the wood has usually been painted black, and the contrast with the white plaster is, I think, rather startling than pleasant.

Increase of dignity in town houses.

In town houses the woodwork was often richly carved, and some of the projecting corbels and roofs are of great beauty. Supports or 'spurs' abound at the sides of doorways, helping to sustain the upper stories, which, according to the fashion of the time, projected beyond the line of the wall below. The ground-story was often of brick or stone, while the upper parts of the house were made of timber and plaster. We may judge of the beauty to which such architecture might attain by the remains of timber-work which exist at Bury St. Edmund's, York, Chester, Coventry, Shrewsbury, and elsewhere; and we may be sure that

London, with its rapidly increasing trade and wealth, was in no way inferior to such cities. It is therefore a grave artistic misfortune for us that the Great Fire of London should have destroyed almost every vestige of Mediæval domestic woodwork in the capital.

The signs of the various trades.

From the upper part of each house projected the sign, which served the purpose of the modern plate-glass window and the name in gilt letters. There was no great display in shop-windows in those days. The stock exposed for view was not large, and shopping was carried on under difficulties. The openings were of moderate size, usually closed with shutters, and sometimes, as in Cheapside, the shops were little better than sheds, one story high, built against the main walls of the house to which they were attached. The sign was therefore of importance, and some of them linger, as we know, to the present day, such as the barber's pole and basin, the pawnbroker's three balls, and the bush for an inn where wine may be had. When the latter is good, however, the old saw declares that it 'needs no bush,' for, as its virtues cannot be hidden, they require no proclamation. The signs must have had their inconveniences in the narrow streets, to which, however, they added a quaint picturesqueness of effect, in keeping with the architecture of the day. If they were a source of possible danger, from their tendency to fall on the heads of wayfarers, they were not likely, at any rate, to cause such serious accidents as the telegraph wires, which have lately been permitted by supine authorities to span our busiest thoroughfares, and to add new dangers to the streets.

Love of the picturesque in England.

A taste for the picturesque has always marked the works of English Mediæval designers, and has distinguished their work from the more stately and regular manner which found favour in France. The difference is doubtless connected with the varying taste of the two nations to which I have before referred—the one loving the town, and the other delighting to make their homes in the country.

Rise in importance of town architecture.

We have now arrived at a period of English history when our domestic Mediæval architecture had advanced to its highest perfection. The plans and arrangement of the houses had been enlarged and complicated to meet the

advancing requirements of civilisation. At the same time, the changes had been gradual, and old fashions still prevailed and affected architectural forms. The country was still the home of the great lords of the soil; but palaces, both episcopal and lay, were rising in the large towns. The chapel was still an essential part of a gentleman's house, although the eventual disuse of it might be foreseen, from the restrictions which were laid upon the services celebrated within it. Castles, with their battlemented towers and lofty gatehouses, yet remained, and were even built or added to; but they were the signs of a state of society now rapidly passing away. The time, however, was ripe for change, and it was soon to come, introducing new ideas into the religious and social life of the day, and consequently affecting architecture in the highest degree. One of the most frequent signs of the times was the rise in importance of the great towns, closely connected as this was with the elevation of classes at which I have already glanced.

Having hitherto drawn most of my illustrations from the country, I now propose to give some consideration to town houses, and particularly to those of Old London.

Towns of Edward I. in France and England.

During the reign of Edward I. a remarkable series of towns were founded by the king—not only in England, but also in his French possessions. The latter became known as the 'English towns,' and were termed 'Bastides' in the French dialect of the district. They are remarkable for a regularity of disposition which we are little apt to associate with Mediæval work. The streets are straight and regular; they cross each other at right angles; and the buildings are planned in regular blocks. The general aspect of the plan resembles very nearly the arrangement adopted in some modern cities of the United States. Although these towns are called in France the 'English towns,' it is possible that this title was given to them in compliment to the English king who founded them, and that the original conception may be due to France. However this may be, they were carried out by English instigation and by English agency; for there is a letter extant from King Edward, while abroad, in which he desires that four proper persons are to be sent out at once from England to carry out his wishes. The

letter was written at Bordeaux, and was addressed to London. In it the king especially declares that the persons sent are to be 'the most clever and able, and those who best know how to divide, order, and arrange a new town, in the manner that will be most beneficial for us, and for the merchants, and who shall be ready and willing to go for that purpose wherever we may send them.'

General plans.

The plan of Montpazier, in the province of Aquitaine, is one of the most regular of the 'English towns' abroad. The market-place was in a central position, with arcades or cloisters round it. Near it was the church, with an open space for processions. The whole was surrounded by walls, with the usual gateways and towers.

The king showed great favour to these places, which became also known as 'Free Towns.' The inhabitants were released from all allegiance to the neighbouring lords, and held their property direct from the Crown. Trade being made free, they were enabled to carry on an extensive commerce, and as they became rich and powerful they constituted a check upon the power of the bishops and nobles, and laid the foundations of municipal freedom. As their liberties excited jealousy, it was prudent that means of defence should be provided; hence the necessity of walls and ramparts. In times of danger the most valuable property was placed in the church, and in some French towns the church was consequently fortified, as at Etampes and Dol in Brittany, and also in the south. The towns were founded by the king as a counterpoise to the power of his great feudal vassals, and they furnish a remarkable proof of the far-sighted wisdom of his policy. Strict orders were given that no one should be allowed to build a castle or fortress in the district attached to each town, in order that their independence might be preserved. Fostered by royal care, and thus favoured by privileges, the new cities grew and prospered, and became known as new or free towns, or in French, *ville neuve* and *ville franche*.

Hull and Winchelsea.

In England the buildings do not appear to have been quite so regular in their plans as in the French examples. At Winchelsea and Hull, both of which places were founded by King Edward, the sites presented peculiarities which

doubtless account for such variation. There is, nevertheless, sufficient regularity in the distribution of the streets and blocks of houses to indicate the model on which they are based. Hull was personally founded by the king, who saw the importance of its position, both as regards the possibility of invasion from abroad and the commerce for which it was fitted. The land belonged to the church, but an exchange was effected, and the king lost no time in urging on the building of the town, to which he gave the name of King's Town, or Kingston, as it is still called. It has been more fortunate in after-times than the sister town of Winchelsea.

The latter was placed on a new site, after repeated encroachments by the sea had almost destroyed the previous village or hamlet. The king or his advisers had formed large ideas of the ultimate importance of Winchelsea; but these were destined to disappointment, and the work was never finished. There is a fine church, partially completed, with a series of tombs, which indicate the fallen fortunes of the city. Within the first twenty years it was twice taken and pillaged—once by the French, and next by the Spaniards; and from these calamities it never recovered. The walls, if built, have disappeared; but three gates remain, with segmental arches and plain details. Some remains of the original houses may still be traced, and also parts of the vaulted cellars which formed their substructure. This mode of building was common at the time, but it has been thought that the vaults at Winchelsea were specially designed as depôts for wine, as the French wine trade was even then considerable, and the position of Winchelsea was convenient for its prosecution.

Rise of industries and guilds.

The establishment of towns, and the privileges granted to the citizens, had a great influence upon the various trades carried on by the latter, and certain places became the headquarters of particular industries. Thus the woollen trade flourished at Northampton, while Norwich was famous for worsted, Totnes for its clothing, and Beverley and Lincoln for their dyes, 'Lincoln green' having a traditional fame. As the various trades prospered, the traders naturally associated, and made rules for their common guidance. From such circumstances arose the guilds, and among the first of

these societies in England appear to have been the Weavers', the Goldsmiths', the Fullers', and the Tanners' guilds. The members agreed to contribute to a general purse for common objects, and hence the derivation of 'guild,' from the Saxon word 'gildan,' to pay or contribute. The guilds were not, however, in all cases trading societies; some were political, and became incorporated, by royal permission, for the local government of their towns; while others formed religious confraternities, devoted to purposes of charity and mutual help. The trade societies are those which are now best known to us as they still exist, although under different conditions from those which dictated their establishment.

The guild-halls.

The houses which were erected by the guilds for the purposes of their societies were among the chief architectural ornaments of Mediæval towns. Few, if any, remain in their original condition in England, although there are splendid examples abroad, as the Cloth Hall at Ypres.

The Guildhall in London is well known to you, and may serve to give some idea of the scale of such buildings, although its architecture has been too seriously interfered with to allow us to regard it as a perfect example. The Guildhall was the great common hall of the citizens, used, very much as it is now, for public purposes, under the authority of the Lord Mayor; each trade or guild having its own separate hall and premises, like the various City companies—their descendants—at the present time. In less important towns than London, the guild-hall of the ruling trade served also as the town-hall, or hôtel de ville, for the general public business of the citizens. In such cases a tower, with a belfry, was usually an adjunct. The liberty to erect such a tower was one of the privileges of the chartered towns, and was prized by the citizens as the outward sign of their independence. The towers and belfries in the towns of Belgium are among the finest structures of this kind, and their chimes have always been famous. It is recorded of Laon, in France, that the king, Philip VI., wishing to mark his displeasure with the citizens, ordered their bells to be sold, and directed that the tower should no longer be called the belfry.

Near to the town-hall was the market cross, a common

Market crosses.

and interesting object in English towns of any magnitude. Many such crosses have been retained, and even restored; as, for instance, at Chichester, where there is a fine example, with a space around it for a butter market. Some of these crosses served also as conduits, and at Lincoln there are remains of a reservoir such as might supply a fountain, a feature unusual in this country, though well known abroad. In such towns the cross was placed at the point of intersection of the four principal streets.

Main streets and gates.

The outer ends of the main streets were closed by gates, consisting usually of an archway with flanking turrets. As the towns expanded, these gates were removed as obstructions, but their names often remain, as in London, where we are familiar with Aldgate, Bishopsgate, Ludgate, Billingsgate, &c. The last landmark of this kind in London, Temple Bar, is already doomed. The streets leading from the principal gates were usually of good width, although the cross lanes and alleys were narrow, and further contracted by the overhanging of the houses. The latter were now frequently ornamented, not only by carving on the wooden framework, but also by enriched plaster between the uprights, a mode of decoration more common, however, in Germany and France than in England.

Old London.

With these general ideas of the usual arrangement of Mediæval cities, let us now direct our attention to London, and consider, as far as our imperfect information enables us to do so, what was its appearance previously to the Great Fire of A.D. 1666, which robbed it of so much of its historical interest.

Origin of the name.

We do not know when London was first founded, but there is little doubt that even when the Romans left Britain it was a place of importance, and it was called Londinium by Tacitus and others. This name has been considered by some antiquaries to have arisen from a mixture of Roman and Celtic titles. A temple of Diana is believed to have stood on the site of St. Paul's, and Luna was one of the names of the goddess. The termination of the name has been traced to 'don' or 'din,' which in Celtic means a wood or hill, or fortified town. Although these conclusions are, however, at best doubtful, it is certain that London became in early

times a place of great importance, and increased rapidly in wealth and population.

The old walls of Roman times.

The position of London on the Thames marked it out as a natural centre of commerce; and the situation, with reference to the Continent, was convenient in days when our kings had important possessions abroad. London was a walled town, and the walls were first built in Roman times, as is proved by the remains which still exist, and are brought to light from time to time as clearances and demolitions are effected. The course of the walls may be roughly traced by the names of the gates. Thus, if we start on a tour round the City from the Tower, then as now a fortress, we come to Aldgate, thence to Bishopsgate, Cripplegate, Aldersgate, Newgate, Ludgate, and so to the Thames, where there was another fort. This fort was probably connected with the Tower by another riverside wall, built parallel with the Thames, and stretching east and west. The names of Dowgate and Belins-gate, or Bilingsgate, indicate the course of this wall. Besides the walls, the Romans must have executed other important works in London, as is proved by the interesting tesselated pavements and other remains which are still from time to time discovered.

London in the twelfth century.

In the stormy times which followed the decline of Roman power London experienced many vicissitudes and suffered much violence, under Danes, Saxons, and Normans. Gradually emerging from such misfortunes, we find it acquiring stability as early as the twelfth century, for in the reign of Henry II. it is thus described by Fitz Stephen, a monk in the house of Thomas à Becket. He says that 'amongst the noble and famous cities of the world this of London, the capital of the Kingdom of England, is one of the most renowned, on account of its wealth, its extensive trade and commerce, its grandeur, and magnificence. It is happy in the wholesomeness of its climate, in the profession of the Christian religion, the strength of its fortresses, the nature of its situation, the honour of its citizens, the chastity of its matrons, and even in the sports and pastimes there used, and the number of illustrious persons that inhabit it.' After referring to the royal palaces, he tells us of the gardens of the citizens, well furnished with trees. On the north, he

says, are 'corn-fields, pastures, and delightful meadows, intermingled with pleasant streams, in which stands many a mill, whose clack is so grateful to the ear. Beyond, an immense forest extends itself. . . . This city,' he adds, 'is on the whole most charming, at least when it has the happiness of being well governed.' He goes on to speak of a famous cook-shop on the river, where fish of all kinds could be had, besides other dainty viands, and describes Smithfield as a horse exchange and market. He then speaks of the pleasure resorts of the citizens, for horse-racing, archery, tilting, mystery plays, boar-hunting, and the like, with skating and sliding on the ice. The worthy monk had not left all his human sympathies behind him on entering the cloister; and he presents us with a view of old London in the twelfth century, possessing many of the advantages and elements of natural wealth, by which succeeding ages have abundantly profited. His account is the more interesting, because we have no thoroughly trustworthy maps or views of an early date, or indeed until the sixteenth century.

London in the sixteenth century.

After the sixteenth century such representations abounded, and from them we may form a tolerably clear idea of the appearance of London under the Tudor and Stuart sovereigns. The peculiarities of its position and the antiquity of its foundation account, doubtless, for the irregularity of the lines of the great thoroughfares, and you will readily trace these in our existing streets of Bishopsgate and Aldersgate, from north to south; and Holborn and the Strand, from east to west.

Remains of Old London.

London is not all changed. The churches of St. Paul and Westminster Abbey are still the great landmarks; London Bridge is still pre-eminent in traffic; the Tower is still the fort of London; and Westminster remains a palace, although occupied by the Legislature instead of by the Sovereign. In the arrangement of modern London we are still controlled by ancient customs, and the lines of the great thoroughfares are to a great extent the same as in olden days. Thus it happens that, although Mediæval London was almost wholly destroyed by the Great Fire, an amount of historical interest clings to it more than to many other cities; and certainly to a far greater extent than would have been the

case had the grand schemes of Sir Christopher Wren for a new London been carried into effect. This remark applies, of course, chiefly to the older and central parts of the City, which were built upon and settled when St. Giles's was a village 'in the fields,' and Lincoln's Inn was almost in the country.

Christ's Hospital and Charterhouse.

The great monasteries of Grey Friars, Black Friars, and Carthusians had been dissolved; the former had become Christ's Hospital and the latter the Charterhouse, founded by Sir Thomas Sutton, whose good deed was thus commemorated by a Poor Scholar:—

> Blessed be the memory
> Of good old Thomas Sutton,
> Who gave us lodging, learning,
> And who gave us beef and mutton.

Such foundations speak well for the public spirit of the age, as well as for the strong religious feeling which is evidenced by Sir Thomas Sutton's own prayer—'Lord, Thou hast given me a large and liberal estate, give me also an heart to make use thereof.'

Cheapside —its shops and conduits.

The great commercial street of old London was Chepe, now Cheapside—Chepe being a market by Saxon derivation. The houses here were of the type I have before described as characteristic of the time, with gables towards the street. I may call your attention to various examples of old houses still existing, such as the ancient timber houses in the Strand, some houses in Chancery Lane, Sir Paul Pindar's house, and others. Most of the houses included shops, which were commonly external structures with lean-to roofs against the front walls. 'Chepe' was the great centre of business, with the best shops of goldsmiths, mercers, and others. One of the famous Eleanor crosses were erected in it, opposite to Wood Street, and two conduits supplied water for drinking and for domestic use. The eastern or great conduit was near to the Poultry, which was used as a market; and the small conduit stood at the western end, towards St. Paul's. The corn-market was held in Cornhill. The Standard was placed close to Bow Church. It had four spouts of water running different ways.

The Exchange was at the eastern extremity of 'Chepe,'

Old St. Paul's and Paul's Cross.

as it is now, and at the west end was St. Paul's, with numerous ecclesiastical buildings clustered around it, and the famous Paul's Cross, from the pulpit of which Church dignitaries preached many varying doctrines. As assemblages here seemed likely to trouble the public peace in the post-Reformation days, when theological strife was only too apt to give rise to violence, the cross was pulled down by order of Parliament in 1643. It was then a covered and partly enclosed pulpit, with a staircase leading to it, and a domical roof surmounted by a cross. In early times penances were performed here, as in the case of Jane Shore. Old St. Paul's was entirely destroyed by the fire, not before the western end had been modernised by Inigo Jones, who built here his famous Corinthian portico, looking down on Ludgate. The old church must have been magnificent, with a length of 700 feet, and the central spire upwards of 500 feet in height.

The Royal Exchange.

There seems to have existed from the earliest times some sort of rendezvous for merchants and traders where the Royal Exchange now stands. At first these personages only met at street corners or under the arcades, which were not uncommon in Mediæval towns, and it was not until the sixteenth century that Sir Thomas Gresham erected a regular guild for the London merchants, thus giving another example of the public spirit of which I have before spoken. The work erected by Sir Thomas Gresham consisted of an open central area, with arcades around and rooms over the same, with shops at the sides; and this was the arrangement adopted in most buildings of a similar nature abroad.

There is a description of the Exchange on an old print, which thus proceeds: 'The Royal Exchange was erected in 1566, at the sole charge of Sir Thomas Gresham, knight, and was burnt down 100 years after, in 1666. After the fire it was rebuilt, most part with stone, with such curious architecture that it surpasses all other changes or burses. The whole fabric cost about 5,000*l.*, one half paid by the Chamber of London and the other by the Company of Mercers. There are 160 shops above, let at 20*l.* rent each, and 30*l.* fine, and several shops below, on every side, and large vaults underneath, which yield considerable rents. The ground

whereon it is built, being but 171 foot from north to south, and 203 foot from east to west, is very little more than three-quarters of an acre, and, when all let, produces 4,000*l.* yearly rent.' [What is that three-quarters of an acre worth now? and what rent would it produce?] The building was styled the 'Byrsa Lundinensis, vulgo, Royall Exchange of London.' It followed the main lines of Sir Thomas Gresham's work, and had an entrance under a central tower, with side arcade.

The Tower

Proceeding eastward from the Exchange, and crossing the busy throng of persons proceeding southwards to London Bridge, we come to the Tower, with surrounding walls and moats. The Tower is a good illustration of what has been previously said as to the gradual changes of an Englishman's house from a castle to a dwelling. At once 'a fortress, a palace, and a prison,' it has played an important part in most of the crises of English history, and many a proud noble has entered the Tower by Traitor's Gate only to leave it for the scaffold on Tower-hill. It is perhaps the most interesting relic of Old London, and has been preserved and partially restored in recent times with judgment and skill. The Tower was evidently a place of great strength, before the use and improvement of artillery, and occupied almost the position of a *tête du pont* with reference to London Bridge, the only bridge of Old London.

Old London Bridge—its shops and chapel.

Old London Bridge had an importance from this circumstance beyond that of its modern successor. It was lined with shops, after the custom of the time—a custom which is still exemplified, as some of you may be aware, at the Ponte Vecchio at Florence. In London the bridge was defended on the Southwark side by a turreted gateway, the upper part of which displayed the heads of those who had died by public execution—a ghastly introduction to the City, which was transferred to Temple Bar in the reign of Charles II. The houses on the bridge had been much altered and disfigured before their final demolition; but some of the older engravings show that the earlier structures were not devoid of architectural pretensions. They were not at first arranged like a street, as at the Rialto at Venice, but were gathered together, so as to form square masses, entirely isolated, with

inner quadrangles, having a continuous passage through the centre, and lined with shops. At the City end of the bridge the first London waterworks were constructed with wheels and pumps in 1582. Until this primitive machinery was erected, conduits and public pumps and cisterns were the only sources of supply available for the citizens. The narrowness of the arches of the bridge, and the obstructions of its heavy piers, increased the current in the tideway to such an extent that to 'shoot the bridge' was a recognised peril, so that frequent accidents happened, and many suicides were there committed. There was a chapel near the centre of the bridge. It projected eastwards, and was dedicated to St. Thomas. The remains of it were uncovered when the present London Bridge was built.

Bridge building in early days was regarded as a work of piety, and was carried on by confraternities called Brethren of the Bridge. Hence the frequency of chapels on bridges, of which many records exist.

The great houses in the Strand.

From London Bridge to Westminster the river, as yet little polluted, was lined with important buildings, the residences of the nobility. Here were Winchester House, the palace of the bishop of that see, with St. Saviour's Church, both on the Surrey side. Hard by were the Globe Theatre and the gardens for bull and bear baiting.

Immediately opposite stood Fishmongers' Hall, and after passing Dowgate and other wharfs, and the sanctuary at Whitefriars, we come upon the Temple Gardens and buildings, standing on the verge of the district saved from the Great Fire. The Templars' magnificent church, so well known to most of us, is one of our finest reminiscences of Old London.

After the Temple the present names of streets serve to recall to us the history of the past. Thus, where Essex Street now is, stood the palace of the famous Earl of Essex, the favourite and victim of Queen Elizabeth. Arundel House was near, and old Somerset House, built for the Protector Somerset by John of Padua. Closely adjoining was the Savoy Palace, of which the chapel still exists, and maintains the rank of a royal chapel. We then find Worcester House, where Beaufort Buildings now are; and

Salisbury House, on the site of the present Cecil Street; Durham House, the residence of the Bishop of that see, and York House, belonging to the Archbishop, next follow. You may mark the site of the latter by the water-gate of Inigo Jones, which now stands, deserted and forlorn, on dry land, cut off from the river by the embankment. Northumberland House, with a fine garden, was the last great house before reaching Whitehall and Westminster. It stood on the site of an ancient abbey. Every trace of it has now, as you are aware, been removed, and the old position can only be recalled approximately for the future by the name of Northumberland Avenue, given by the Metropolitan Board of Works to their new street connecting Charing Cross with the Embankment. It is impossible to regard the sweeping away of old landmarks without regret; but in the case of Northumberland House the old buildings had long since been destroyed, and there was nothing in their comparatively modern successor of sufficient artistic value to prevail against the urgent necessity for improving the main communications of London.

Charing Cross.

Where the statue of King Charles is now placed, the cross of Charing once stood. It is supposed to have been octagonal in plan, with eight statues in niches. No precise drawings of it exist, but the restoration of the cross in front of the South-Eastern Railway Station was based, as far as possible, on the scanty data of archæologists. Another Eleanor Cross was situated in Cheapside, but it seems to have been destroyed or removed. It was succeeded by Cheapside Cross, which was pulled down, in Puritan days, under an order of Parliament, by Robert Harlow, with a troop of horse and two companies of foot soldiers. We may judge from the force employed that the work was not popular with the citizens, although it is recorded that 'at the fall of the top cross, drums beat, trumpets blew, and multitudes of caps were thrown into the air, and a great shout of people with joy.'

Baynard's Castle.

Returning from Cheapside to the river, we must not omit to notice Baynard's Castle, which stood close to the great monastery and church of Black Friars, and between the latter and Queenhithe. Baynard's Castle was a relic of Norman

architecture—a rectangular mass with flanking turrets. It had royal reminiscences, and Richard III. was crowned there. The English kings were well supplied with palaces; for, without reckoning the Tower and Baynard's Castle, we find the Savoy, Whitehall, and Westminster within a short distance of each other. Near to the Savoy was the palace of Lord Burleigh, afterwards called Exeter House, and ultimately converted into a bazaar and menagerie under the name of Exeter Change.

Whitehall.

Whitehall was not originally a royal palace. Under the title of York House it had long been the London residence of the Archbishops of the Northern Province, and so remained until the fall of Cardinal Wolsey, when it was seized by his royal master. The name was then changed to White Hall, a title supposed to have been suggested by the whiteness of some stone building then in progress. It was intendedto connect Whitehall with Westminster, and to give to the whole range of buildings the title of the 'King's Palace at Westminster.'

Westminster Palace and St. Stephen's Chapel.

Westminster had been a royal residence from Norman and even Saxon times, and the walls of Westminster Hall are full of remains of Norman arcades, which have been since filled up.

At right angles to the hall was St. Stephen's Chapel, one of the most beautiful structures of the thirteenth and fourteenth centuries. It was the Chapel Royal of the palace, and was well worthy of its name. Unfortunately it is now lost to us, having been destroyed by the fire which consumed the old Houses of Parliament in 1834. It had large four-light windows of beautiful tracery, divided internally by niches, and there was a wooden roof. The crypt below the chapel, not having been wholly destroyed, has been restored. It is unusually lofty for a crypt, and had been used originally for a chapel. When it was decided to rebuild the Palace of Westminster, there was an intention to restore this building to its original use as the chapel of the palace. Unfortunately this idea has never been carried into effect, and Westminster is without the Chapel Royal, which has always been considered a necessary adjunct to a royal palace.

The precincts of Westminster were entered from White-

hall by an archway, the design of which has always been attributed to Holbein. It was a curious structure, with turrets flanking a centre gateway, the whole being covered with colour in the form of tiles and earthenware, after a fashion which has in some degree come again into favour in our own times. We have unfortunately no remains existing of the old palace at Westminster, as the fire swept away all traces of it. Happily the Abbey is still our inheritance, and presents much the same appearance as of old, if we except the towers of Sir C. Wren, and the heterogeneous assemblage of sculpture, much of it indifferent and nearly all of it unsuitable to a great Mediæval church. Holbein's gate.

In New Palace Yard the wool market was held. There was here a conduit, from which ran wine on great occasions, such as coronations. Near the angle of the yard stood the clock-tower, not far from its present graceful successor. The clock possessed a great bell, which, we hope, was not cracked, as is the case with unfortunate Big Ben. New Palace Yard.

The buildings I have mentioned, being all of importance, were for the most part solidly constructed; but we must not forget that the ordinary houses of the citizens were still built of wood; while wooden projections, such as pent-roofs and balconies, abounded. Stories projected one beyond another, until in narrow streets they almost touched. Picturesque they might be; but, alas, how dangerous! and how sadly was their danger proved! Close contact led easily to infection, the danger of which was aggravated by the absence of fresh air and ventilation. The Great Plague in 1665 plunged the city into mourning. It is scarcely an exaggeration to say, in Scripture language, 'There was not a house where there was not one dead,' for it has been reckoned that one in four of the population was carried off by the disease, and 70,000 persons died. The Great Plague.

Hardly had the plague ceased when the Great Fire swept away almost the whole of Mediæval London. So extensive a destruction could hardly have been possible, except under the conditions of domestic architecture which I have attempted to describe to you. Evelyn records in his diary that it commenced at ten o'clock at night on September 2, The fire of London.

1666, and continued for three days. Speaking of the helplessness of the people, he says: 'The conflagration was so universal, and the people so astonished, that from the beginning, I know not by what despondency or fate, they hardly stirred to quench it, so that there was nothing heard or seen but crying out and lamentation, running about like distracted creatures.' The Thames was covered with boats, conveying to places of safety families and such of their goods as they could hastily save. The flames became so widely spread that none could approach for the heat, and the glare was seen for fifty miles. Evelyn returned to his country house, having, as he thought, seen the last of London. He writes in his diary: 'I returned with a sad heart to my house, blessing and adoring the mercy of God to me and mine, who in the midst of all this ruin were like Lot in my little Zoar, safe and sound.' Well might he suppose that the calamity was irretrievable. Five-sixths of the City lay in ashes, and the flames had extended over a space of a mile and a half in length, and half a mile in breadth. As Evelyn wrote, 'London was, but is no more.'

This was in 1666; what would he have said, if he could have known that 200 years afterwards London could be described, in the language of a recent writer in one of our periodical reviews, as covering an area of 78,000 acres, with a jurisdiction over 576 square miles, with four millions of inhabitants, increasing at the rate of 75,000 a year?

LECTURE VI.[1]

FIFTEENTH CENTURY AND ENGLISH TRANSITIONAL ARCHITECTURE.

I PROPOSE now to pursue the consideration of fifteenth-century architecture in England, together with the developments of later periods.

Change from the castle to the mansion.

I. We have found in our studies of domestic architecture a steady, though gradual, transition from the castle to the peaceful manor-house of the English squire. Features originally devised for defence were clung to with the instinctive affection which springs from use and tradition, and such details thus survived as architectural ornaments long after the reasons for their existence had passed away. The castles, on being transformed into palaces, lost but little of their grandeur, while they gained in architectural beauty of detail. They continued to be, as of old, the central places of abode of the great lords of the soil. They could accommodate, and to some extent protect, large bodies of retainers; but the necessities of warfare were gradually passing away before the advance of civilisation and of settled order. The great English mansions thus came to assume that air of mingled dignity and homeliness, which has ever been considered their most pleasing characteristic. The walls still enclosed large spaces, and could be defended in case of need. The drawbridge was often maintained. Bastions, battlements, and machicolations were preserved, if not constructed; but the character of the buildings enclosed was greatly altered. The house and the castle are seen combined, not indeed without a certain antagonism, of which the ultimate results

[1] Delivered February 14, 1878.

could already be foreseen. The old was becoming older, and verging on the obsolete, while its destined successor was steadily advancing to maturity.

Signs of transition.

We may trace this conflict of principles very clearly in castles like those of Kenilworth and Warwick, which contain buildings of various dates, and in which are preserved remains of the works of different builders. At Kenilworth the large square tower or keep declares its early origin. I have already referred to the original prevalence of this form, and to its gradual abandonment in favour of curves and circles. Warwick Castle, built at the end of the fourteenth and the commencement of the fifteenth century, illustrates this change, for we have here the keep of a more irregular form, made up of angles and curves. The gateways, walls, turrets, and other defences are still found, but the dwelling of the owner has a prominence altogether new and significant. It is no longer surrounded by the walls, but actually interrupts their continuity. It now refuses to be cooped up in dull courtyards, but is built against the river, and looks over the country. The various offices and departments, which were in earlier times scattered throughout the whole of the enclosure, are brought together and aggregated in one mass, with every regard for dignity and convenience as then understood.

Varieties of use in different places.

From such an arrangement it was but a step to the altogether unfortified mansion. The walls were comparatively useless since the introduction of gunpowder, and soon became mere enclosures to keep off robbers and pilferers; thus losing altogether their character of an integral part of the building. At the same time, the latter gained by the increased space, and spread itself out, not only in greater masses, but by including in its own construction spacious courts and quadrangles. As these changes were the results of peace and prosperity, they varied naturally according to the condition of different parts of the country. Thus, in the north and towards the Scottish border, on the sea-coast, and also on the side of Wales, we may find a system of fortification lingering, after it had become merged in more domestic construction in other and more settled districts. At Alnwick, for example, although the original structure received many additions by successive owners, the military

and defensive character of the whole building was consistently preserved. Not only were the moat and external defences jealously maintained, but within the walls were to be found wells, ovens, slaughter-houses, and all requisite appliances for resisting a siege.

The Peels, or tower-like houses, have been before referred to as existing in the Border counties. They possess considerable strength, and resemble portions of the larger castles, forming a connecting link between the latter and the unfortified dwelling-houses, which in the fifteenth and succeeding centuries became common in England. Few large houses were built before the latter date without some attempt at fortification, and such defensive works were indeed almost compulsory. Royal licences were issued, which were in fact commands, in virtue of which the builders of important structures were bound to build walls of defence, and 'embattle, kernel, and machecollate' the same. These documents were called 'Licences to Crenellate,' and Mr. Parker has published one of them, the date of which is believed to be A.D. 1483. It is a licence from 'Edward, by the grace of God King of England and France and Lord of Ireland,' to Edmund Bedingfield, esquire, of Oxburgh, in the county of Norfolk. It is declared to be given in consideration of the latter's good and gracious services, aforetimes rendered to the king, from day to day, and 'which he still continues inclined to render.' He is therefore to be permitted 'to build, make, and construct, with stone, lime, and sand, towers and walls in and about his manour of Oxburgh,' so that such manor may be enclosed, and 'the walls and towers so embattled, kernelled, and machicolated, built, and constructed, to hold for himself and his heirs, for ever.' A further clause declares the royal pardon for all transgressions previously committed by Mr. Bedingfield, in consideration of his building the fortifications above described, and further grants to him certain privileges as to holding markets and taking tolls therefrom. The deed is dated from Westminster in the twenty-second year of the reign of King Edward IV.

The Peels or tower-houses.

We may, I think, conclude from this document that to 'crenellate,' or fortify, in some measure, a private dwelling-

house, was at once a privilege and an obligation. It was a social distinction, marking out the house and its owner as possessing importance, and it was also apparently a matter of public policy, inasmuch as the Crown was ready to grant advantages in order to secure its accomplishment. The offer of such inducements, however, indicates that the necessity for defences was passing away, and that they had become a matter of fashion and rarity. Henceforward the disuse of fortifications was general.

Haddon Hall.

Haddon Hall, in Derbyshire, well known to most of us, well illustrates the state of transition. At a distance it presents a castellated appearance; but on closer inspection very little real fortification can be seen. The gateway, with its tower, is part of the fifteenth century buildings, and displays that compromise between details of defence and ornament which was characteristic of the period. The buildings are no longer huddled together within enclosing walls and turrets, but there are two open courts, with the hall in a central position between them.

The chapel.

The chapel is of great antiquity, not later in parts than the twelfth century, as there are evident remains of Norman work. The building is irregular, and appears to have had an existence independent of the castle. It is rather a nucleus around which the latter has been built, than a private chapel belonging to the place. It may have been originally a parish church, existing from earlier times, before the adjoining structures were erected. The chancel, which was the private chapel of the house, dates from the fifteenth century.

The hall.

We see in the earlier parts of Haddon Hall all the characteristics of a Transitional period, and the hall is of Perpendicular architecture. The offices attached to it are spacious, and suitable to the advancing ideas of comfort; containing store-rooms, buttery, and kitchen, with ample hospitable-looking fireplaces. In the exterior there are still remains of the details of fortification in the 'crenellated' parapets, but in the later additions to the building domestic influences are paramount. These additions are of much later date, and have probably replaced an earlier structure on the same site.

The Elizabethan wing consists of a long gallery, as usual in such buildings, a parlour or withdrawing-room for the family, and other reception-rooms, with a range of servants' offices below. The whole is thoroughly domestic in its character, and looks on one of the quaint gardens of the time, with the charming terrace so often sketched by artists. The Elizabethan wing.

We thus find at Haddon that which is so delightful to the archæologist, a history in stone, not spoilt or falsified by the modern restorer, although the older builders have worked their will upon the pile, and, as usual, have paid little regard to the work of their predecessors. The old Norman church is the key of the whole. It may probably have preserved an especial sanctity. Defences would thus be necessary, if only for the security of the offerings at the shrine. A stronghold would be attached, with walls of *enceinte* to enclose the church. Situated far from the Border, we need not suppose the works to have been of great strength or importance, and such as they were, they might soon disappear, and their materials be used as a quarry for the succeeding buildings. Each phase of architectural art has left its mark. There is a Norman font in the aisle of the chapel, an Early English window in the nave, while one of the Perpendicular period adorns the chancel. The entrance gateway, the hall, and offices are of similar style, and at last we come to the purely domestic buildings of Elizabethan architecture, already described. Here we have large windows, spacious rooms, and elaborate internal decoration of oak-panelling and plaster, with wide fireplaces and other evidences of the comfort and refinement of English home life. The type of the Mediæval fortified mansion or manor-house had passed away, with the feudalism which had first given birth to it; and we may observe in these transitional mansions a striking evidence of the increase of wealth and luxury among the people, which has continued to our own time. The whole a history in stone.

II. Having passed in review the principal distinguishing peculiarities of the Mediæval architecture of the fifteenth century, we may now turn our attention to the succeeding phases of English architecture. After the close of the fifteenth century the forms of Mediæval art became poor and debased, the style appeared to be dying out, and a The Elizabethan style.

change was imminent. It came in the forms known to us as Elizabethan and Jacobean, to be shortly followed by the Renaissance and Classic Revival.

Its wide diffusion.

In treating of this Transitional work, it must not be supposed that the principles which guided it are only to be observed in great palaces and mansions. We naturally think first of such lordly piles as Hatfield, Hampton Court, Haddon, and the like; but it may be doubted whether the examples to be found in more humble tenements are not at the least of equal interest. Indeed, it is often the exuberance of ornament in the great mansions, which offends an eye, better pleased with the quaint though simpler treatment of the Elizabethan grange, farm-house, or cottage. It must, I think, be admitted that the style proved itself to be equal to the demands made upon it, although with drawbacks to be presently noticed; and that, so far, it may therefore be held to have justified its existence.

Its mixture of Gothic and classical details.

The principal peculiarity of Elizabethan work which distinguishes it from the Mediæval styles which it succeeded, is the admixture of classical details with general forms of a Gothic character. Thus the gable, an essentially Gothic feature, was retained, though masked, deprived of its importance, and broken up into forms more or less fantastic. Mullioned windows were still employed, but often in combination with pilasters and with a complete change of mouldings. In the interior the hall and other arrangements of the Mediæval house were for a long time to be found as before; but they were supplemented by numerous additions and modifications. The latter were indeed so varied and fanciful, that it is not easy to define with precision the forms of so-called Elizabethan art; for we may find in one example a roughness and vulgarity of execution almost deserving the title of barbarous, while in other buildings of the same style we can detect evidences of purity of taste, together with a beauty of detail, almost equal to classical examples of good Italian work.

Influx of foreign workmen and foreign styles.

There is little doubt that at this period there was a considerable influx into England of foreign workmen. Such an influx had indeed existed from as early a date as the Norman Conquest; but the movement had now acquired a

greater importance from the increased and increasing wealth of England, and the comparatively settled and peaceful condition of the country, as contrasted with the general state of Europe.

Although our forefathers were far from any recognition of the modern doctrine of free trade, their commerce with foreign nations was already assuming large proportions, and the merchants of London and other large towns were consequently both rich and influential. We have already alluded to the importation of glass from Italy, both for drinking vessels and windows, and of tapestry from Arras. Cloth was also sent from Belgium and Flanders, and the spices of Arabia and India were not wanting. With these importations came, as we may suppose, workmen, either in search of adventure, or driven from their own lands (as were the Huguenots from France) by religious persecution or civil dissensions. These men brought with them the cunning of their various arts, and, as the Classical Renaissance was more advanced on the Continent than with us, they would naturally prefer the forms of design with which they had already become familiar in their own country. For if we consider Inigo Jones as the first architect of note who devoted himself to Classical architecture in England, we may observe that he was born when Palladio was verging on the grave, and that St. Peter's at Rome was designed about a century before the Classical Revival in England.

Defects in execution of details and in sculpture.

The Elizabethan method indicated the first attempt at change. It was to a great extent a fusion between the new and the old architecture, and in that character has not perhaps always received the attention and consideration to which it is entitled. This neglect has probably arisen to a great extent from the rude execution of much of its detail, and the badness of its representations of the human figure. Nevertheless, there are numerous examples of good taste and delicate workmanship of ornament, and if the style had lasted long enough in the ascendant, there is no apparent reason why the defects of execution should not have been rectified.

The same may be said of Elizabethan sculpture. There can be no such thing as perfect architecture which does not

include good sculpture. The Mediæval architects of the thirteenth and fourteenth centuries well understood this truth, and applied themselves to its recognition with great though partial success. The Greeks were, as we know, the great masters of plastic art, and it may be doubted whether the satisfactory application of sculpture, in its highest development, has ever been attained apart from Classical ideas and principles of design.

These defects due to practical difficulties.

Now the Elizabethan architects were ready to admit these principles. They did so, indeed, to a very great extent in their enlarged niches, their pilasters decorated with arabesques, and their employment of ornament as a surface decoration. But as to sculpture of the human form they were altogether deficient, and their execution lagged far behind their intention. Why was this? In the first place, theirs was an age of sudden development. Wealth and prosperity had come upon the country rapidly, or, to quote a modern saying, by 'leaps and bounds.' There was much work to be done, and not a corresponding number of hands to do it. Hence grand ideas, but ill-finished workmanship. Italian artists, like John of Padua, might direct, but they were obliged to trust to German, English, and Flemish workmen to carry out their ideas. Sculpture had not flourished in its highest forms, in England, during the later phases of Mediæval art. Carved ornament was indeed prominent enough, as, for example, the ever-present roses of the Tudor period, but figure sculpture had become strained and even grotesque. These are also the faults which strike us in Elizabethan work. We find in it much to admire, if only the execution were equal to the design. Figures, bas-reliefs, and sculptures abound, and it is not the fault of the style if they are not good. Often grotesque and eccentric, the style itself has yet a picturesque striking character, and is racy of the soil.

Such as it was, the Transitional style filled up the gap between the late Tudor of King Henry VIII. and the revived Classicalism of Charles I.; and has continued to be employed even down to the present time, passing through various phases, now leaning on Gothic, now on Classical traditions, still subsisting, indeed, with certain modifications,

in that which has lately been termed Queen Anne architecture.

Use of plaster.

Another circumstance to be now specially noticed is the presence in the same building of different materials. We have seen that, roughly speaking, in early Mediæval times, the private residences were of wood, and the castles, abbeys, and churches of stone. Not only so, but the construction was simple. Different trades—as, for example, that of the smith—might pride themselves on their technical skill; but their efforts were generally isolated, and there was rarely to be seen that combination of labour which some of the great Elizabethan structures exhibit. Thus, to the mason, bricklayer, and carpenter, was now added the plasterer, whose work, both on wall and ceiling, is perhaps the most interesting peculiarity of the style. It has been too much the custom of late years to depreciate this material, by a reaction springing no doubt from its great and frequent abuse. No artist, however, will, I think, treat plaster with contempt, who is familiar with the intricate designs and fine and often beautiful execution of many an Elizabethan ceiling or frieze. The use of plaster ceilings was a natural consequence of the custom, which now became common, of building houses of several stories.

Tendency towards horizontalism.

From the Norman house of a single floor, with its central uncovered atrium, we have advanced to the old English mansions of Burleigh, Crewe, Hatfield, or Longleat, with their numerous chambers, arranged in several floors and built around open courts. The Mediæval artists followed a vertical system. Arches, gables, and pinnacles were alike aspiring, and the glory of the style were the towers and spires. House building, when it became necessary to employ several floors, naturally drifted into horizontalism, and so turned towards the trabeated systems of classical art. Ceilings of large spans, sometimes coved and groined, but often altogether flat, came into use, and the plasterer was equal to the occasion, by devising ornaments of an original and pleasing nature, for the decoration of these flat and curved surfaces. Here, as in other cases, the construction called for the ornamentation, and the latter did not dictate to the former.

Use of brick with or without stone.

There is little trace, in Elizabethan architecture, of the skill which raised the vaults and groinings even of Tudor times. Elizabethan masonry is indeed often highly elaborate, as, for example, in the curious and ornamental scrolls, and fantastic gables and turrets, but the elaboration is for the most part of ornament only. The old energy of construction appears to have died away, and its place is imperfectly supplied by applied decoration. As the mason lost in importance, the bricklayer advanced, the two working commonly together, in the combination of red brickwork and stone, so familiar to us in almost all parts of England. When stone was abundant, it still, of course, continued to be the material most used; but in other parts, as in the eastern counties, brick houses exist which were erected from the fifteenth century, and in the later examples are to be found moulded bricks and terra cotta, which played an important part in certain types of Elizabethan architecture.

Moulded brick for chimneys and elsewhere.

These details were first commonly used in the reign of King Henry VIII., although there may be occasional instances of their earlier employment. There is a good example in Sutton Place, near Guildford, built by Sir Richard Sutton about 1530. Here the mouldings of doorways and windows are of moulded brick or terra cotta; and surface decoration abounds, all executed in the same material, which was now extensively employed, though not often as freely as at Sutton Place.

For chimneys brickwork was generally used, and the stacks of massed and clustered shafts soon became one of the most striking architectural features of the time. Springing, as they did, from domestic necessity, their importance was frankly recognised by the builders of the time. Sometimes square, sometimes circular, polygonal, or octagonal in plan, they were for the most part grouped together, and stood on continuous plinths. The capitals were in some cases single, and in others continuous, like the base, and they were frequently placed on internal walls.

Its disuse and revival.

There are numerous examples of such chimneys, familiar to most of us, in which the moulded brickwork is of the most elaborate description, like the red brick details of Hampton Court Palace. It is evident that the designers of

these works delighted in the use of moulded brick, and devoted themselves heartily to its study and manufacture. The custom waned, however, until in modern times it seemed to have been lost, and a tax having been placed upon bricks, the usual deadening influences of such fiscal interference set in, and progress and improvement seemed to be at an end. Happily, this state of things is over. We have free trade in bricks, as far at least as the State is concerned; and the revival of interest in brick architecture, and the increased employment of moulded brickwork, is one of the most notable signs of the present time. So much so indeed, that it almost seems necessary to say a word of caution to enthusiasts, to induce them to remember that the legitimate use of moulded bricks is limited, and needs both taste and judgment.

The same remark holds good with reference to terra cotta, which is indeed only another form of brickwork. Valuable as this material is, and readily as it will lend itself to artistic treatment, it cannot compete with masonry as regards solidity or truth of line. It was only occasionally used by the Elizabethan builders, excepting for such ornamental and isolated structures as chimney-shafts.

In cases where stone was not easily attainable, the walls were built of brick, frequently of red colour, with dressings of stone; the mullions of the windows, the string-courses, parapets and copings being constructed of the same material. The bricks were usually of smaller size than our regulation dimensions. They were not very regular in shape, and consequently the joints were large, with a good deal of mortar; but, as the latter was usually good, the walls were not destitute of solidity and strength.

Coloured bricks—their use and abuse.

The bricklayers seem to have thought that the surface of their work needed ornament, for they were fond of using a few black bricks with those of other colours. The latter were disposed so as to give the well-known diagonal patterns in the brick walls of their buildings. This treatment is undoubtedly pleasing when not used in excess. It breaks the effect of monotony which too much plain surface is apt to produce. It is unobtrusive; and while it is an evidence of thought and care on the part of the builders, it does not,

when sparingly employed, challenge attention or arrest the eye by startling contrast.

In some of our recent revivals the use of parti-coloured brickwork has been common. It has respectable precedents in its favour, *only when used in moderation.* An idea, good in itself, is easily overdone, and the great danger which waits on imitators is exaggeration. It is thus with the use of the coloured lines, diapers, and patterns, which we so often see used in edifices of moderate dimensions, which cannot afford to trifle with the element of size. The effect of such a treatment is too often to minimise the building, and to weary the eye with a succession of tiresome and uninteresting geometrical puzzles. I would therefore caution the student against a too ready indulgence in this cheap decoration, and would counsel him to devote his first care to the design of the masses and proportions of his work. The introduction of coloured brickwork into Elizabethan buildings is seldom liable to such objections as I have named, and with due restraint it is a fair expedient in the hands of the architect.

Development of the size and importance of windows.

Perhaps the most notable development of the period we are now discussing is the treatment of the windows. From the few and scanty loopholes of the castle we have advanced to a perfect blaze of light, and walls almost made of windows, as at Hardwick Hall, Derbyshire. Oriel windows had long existed, particularly in connection with the dining-halls. They were, however, commonly used only where special dignity or importance was sought. We now find oriel and bay windows adopted with the greatest freedom, so that they may almost be said to be inseparably connected with Elizabethan domestic work. We have projecting windows of all kinds of design, with canted sides, square sides, curved sides, and even semicircular in plan. They are usually built up from the ground, although the use of corbels was still frequent. From being a subordinate feature, the windows now challenge attention, and dominate the gables and other parts of the elevation. Not only are they wide and ample on plan, but they are of such height that they need to be divided by horizontal transoms, several of which are often to be seen in the same window.

The change from mediæval economy to Elizabethan exuberance in the matter of windows is very remarkable. It was foreshadowed in the works of the Tudor period, and even church architecture shared in the movement. The great east window of Gloucester Cathedral is an instance of daring, I had almost said reckless, extravagance of fenestration. The Elizabethan builders went, however, as a rule, beyond their Tudor predecessors in this respect. They widened the bays and increased their projection, they lengthened the lights, discarding tracery, and even the flat four-centred arch which so long lingered as a relic of Mediæval forms. Their windows were, as a rule, made up of rectangular divisions; and arches, which had now become semicircular, were reserved for doorways.

Slight traces of Gothic details.

We may still trace a disposition to coquet, as it were, with Gothic details, particularly where ecclesiastical feeling was in any way regarded. Thus, at Crewe Hall, where all the windows of the rooms are square in their form, there is one exception to the general rule. This is in the chapel, where the window, which is semicircular on plan, has curved heads with cusps set in a square, in the later Mediæval manner. This circumstance is the more remarkable as the whole building was erected at the same time—from 1615 to 1636.

Greater cheapness and plentifulness of glass.

It is evident that glass must have become cheaper and easier to procure, before such windows as those of the Elizabethan era could be planned and executed. This was doubtless the case, being one of the results of the advance of the country in wealth and commerce. It was not very long since that glass windows were luxuries, carried about from place to place by the great lords on their journeys to their various country seats or town palaces. Windows were holes in the walls, to be closed by wooden shutters, and therefore not to be lavishly employed. Now we find enormous surfaces of glass, with little attention to shutters or other means of security. Not only was glass readily attainable, but men were able to think more of the comfort, and less of the defensive security, of their residences.

Window-cills.

In early examples, and in exceptional cases, we still find evidences of a certain distrust in the height of the cills

above the floors, so that it is difficult, and in some instances impossible, for the inmates to look out of the windows. In almost all cases, indeed, the window-cills are higher than modern ideas approve. This is, however, in all probability often a mere question of taste. Our forefathers do not seem to have attached the same importance to the enjoyment of a view of fine scenery as we do, nor were they fond of living on the ground floor. The chief room of the Elizabethan residences was a long gallery, an upstairs apartment, usually extending the whole length of the house. The great reception-rooms, excepting the dining-hall, were also frequently placed upstairs, and under these circumstances a good view of the surrounding country could be readily obtained.

Balconies.

A low window-cill is a feature common in southern countries, and connected with the frequency of balconies. It has never been a favourite in England, as it is, for example, in France, where it is the custom to carry down the windows, in almost all cases, to within a short distance of the floor. In genial climates the architects were ever eager to use the balcony as one of the most obvious means of producing effect within their reach; but in English domestic work it was, as a rule, forbidden by the exigencies of the climate, and the feature is not commonly to be seen in our old architecture.

Gables.

Another peculiarity to be noticed is the irregular and often fantastic shape of the gables. The principles of design now in vogue had become so much influenced by classical ideas, that the verticality of former days was out of date, and a more horizontal treatment was everywhere apparent. In houses of several stories the floors asserted themselves, even externally. Buildings were crowned with cornices and parapets, while roofs of moderate pitch and span replaced the high coverings of earlier times. The gable thus lost a great part of its original importance. It was not, however, by any means discarded, and in some cases even seemed to be regarded with special favour, from the care given to the design of the varied outlines which had come into favour.

With simplicity of form the real importance of the gable had very much passed away. It had become, as it

were, a plaything, to be used as an ornament behind projecting windows. It was frequently cut off from below by cornices and parapets, and so recessed at to lose any great amount of dignity. For farm-buildings and structures of moderate pretensions the gable still kept much of its old prominence; but in mansions, such as Crewe Hall, it had become a minor detail in the composition; while at Longleat, and still more at Wollaton, it was only represented by scrolls and ornaments, recalling in an indirect manner its former outline.

Towers.

A similar declension may be observed in the importance of towers. At Wollaton, indeed, the tradition of the old keep of the castle survives in the elevated mass of the central hall. The Elizabethan was not, however, a tower-building style. Turrets indeed abound, but they are seldom of much structural importance. Attached to gateways and flanking entrances, they served to keep up a certain stateliness, and preserved the traditions of earlier days. The high spire-like tops had gone, with their stone finials and crockets, and the favourite mode of finishing the turrets was now a depressed form of ogee, commonly made of wood and covered with lead. In the times of castle building the tower was the house; now the house was everything, and turrets were only ornamental additions.

Fireplaces.

The sky-line was broken by chimney-shafts, arranged, as has been said, in groups or in lines, and their number and importance were significant of the increase of domestic comfort now sought for in the internal arrangements of the house. The fireplaces had become the most conspicuous feature of the living-rooms. They are often massive structures, extending to the ceiling, and ornamented with rich panelling, niches, and sculpture. They illustrate very clearly the transition that was in progress, and the taste that was springing up for Italian detail and style. The earlier examples of Elizabethan fireplaces have projecting hoods, and follow the ancient manner of construction which was pointed out in our examination of the works of the thirteenth and fourteenth centuries. Gradually departing from this type, we come to designs of a less prominent character as regards shape, and more decorated in detail.

Chimney-pieces became important architectural compositions, built against the side of the room and forming its chief ornament. They were usually divided into two parts, and the rudiments of the window-shelf began to appear, though the time of nicknacks was not yet. The material was usually stone, and this was sometimes employed for the whole structure, though more commonly the upper part of the composition was made of wood, and even of plaster.

Wood-work.

The amount of woodwork in Elizabethan houses was very great. Panelling was not only plentifully used for window and door dressings, but it also extended from floor to ceiling in the galleries and principal rooms. The staircases also were often masterpieces of the carpenter's art. The panels were designed with numerous mouldings, of shallow section, often roughly worked. In the best examples the mouldings were worked on the solid rails, and in the earlier work were combined with chamfered top and bottom rails, in accordance with the custom of Mediæval workmen.

The wood used was generally oak, and the grain or pattern upon it is very distinct and far more beautiful than we can generally obtain in the oak and wainscot of modern commerce. Our forefathers grew and worked their own timber, and were better able than we often are to refuse the bad and select the good. Modern possessors of old English mansions have often complained of the abundance of oak panelling. It has grown dark and almost black with age, and thus has given the apartments a sombre appearance, and has caused difficulties in lighting it, especially at night. Of late years we have seen a great movement of restoration, which has in many cases taken the form of undoing previous mischief, and numberless have been the cases where the old oak panelling has been found concealed under coats of white paint and paperhanging. The early habits of our forefathers led them to think little of lighting their rooms at night, and with gas and other illuminating agencies at our disposal, there need be no reason for us to deny ourselves the pleasure of restoring their work to its original beauty.

Summary of results.

And now I must for the present bring the description of the Transitional style before us to a close. Having described some of its peculiarities, we will, on another occasion,

examine some existing examples of this manner of work more in detail. As regards the style itself, it is impossible to claim for it a high artistic position, at least as it was worked out by the Elizabethan architects. At the same time, it may be doubted, as I have before said, whether full justice has been done to its merits, and more particularly to its possibilities.

The buildings which were erected in the Elizabethan style have qualities not without claims on our approval. There was evident in them, in the first place, a care for architectural effect; the construction was generally sound and truthful; and whether the building were a palace, as at Hatfield or Burleigh, or a farm-house, or a plain yeoman's dwelling, there was an appropriateness in the design which rarely fails to please. If we are sometimes offended by clumsily executed mouldings or by the intrusion of discordant forms, we must remember that their designers were feeling their way, and that but for circumstances, hereafter to be noticed, they might, if left alone, have achieved something purer and better.

Some modifications of architecture were imperatively called for by social changes, and these were sought in the direction of greater elasticity. The methods adopted, whatever their faults, not only answered their purpose, but were perhaps more distinctively English than any of those which preceded them, or by which they have been followed. The English Transitional style had thus a strong marked and national character. If it had not the grandness of the Italian, it was better adapted to English wants, tastes, and the requirements of the climate. If it missed the picturesqueness of the French, with its affluence of dormers, balconies, and turrets, it had, nevertheless, a local colour and effectiveness of its own, suiting well the parks, dales, and valleys of English counties. It spoke of home life, with all its softening associations; and even where it displayed the grandeur of wealth and rank, it did so in such a manner as to indicate the position of a landlord living at peace among his tenantry, rather than that of a feudal chief, cherishing exclusive privileges, and obliged to be ready at any time to defend the same, and subjugate the people

beneath rather than around him. The mansions of Old England were thus houses, and not castles, and they remain to us in great numbers, in all their beauty, while many a prouder structure abroad has disappeared by incendiary fires, or has been laid waste by civil war.

In the works of the Elizabethan period in this country we may, I think, see traces everywhere of that measured and gradual advance in civilisation and comfort, as well as of the respect for law and order, which has prevailed more or less in our fortunate land through the most troubled times, and which has consequently and appropriately found expression in Transitional English architecture.

LECTURE VII.[1]

TRANSITIONAL OR ELIZABETHAN ARCHITECTURE.

My last lecture dealt with the architecture used in this country in the sixteenth and seventeenth centuries, during the reigns of Queen Elizabeth and James I., and known commonly by the titles of Elizabethan and Jacobean.

Transitional character of Elizabethan architecture.

It may be appropriately called Transitional, for it was, as we then saw, varied in its character, and unsettled in its principles. Clinging to Mediævalism, in its affection for mullions, gables, and general picturesqueness, it nevertheless aimed at the regularity, measured symmetry, and details of Italian work. Columns, pilasters, balustrades, and cornices are evidences of this intention, and if the style had lasted long enough to have enabled the workmen to acquire more thoroughly the grammar of their art, it might have led to a national style, combining freedom with order, picturesqueness with purity of detail. This, however, was not to be; a taste soon arose which looked down on both Elizabethan and Gothic art alike as barbarous. Disdaining compromises and proud of its recently acquired knowledge, every form till then familiar was proscribed by the new taste, and our architecture was henceforth to wear an Italian dress. The works of the Elizabethan builders were therefore, as has been said, Transitional, marking as it were a truce before the battle, a pause which heralded a revolution. The revival of purely Classical architecture will claim notice from us hereafter; and if we bear in mind the tendencies of modern taste around us at the present time, we shall, I think, find that it has lately been drifting in a direction not very far removed from that taken by the architects of the Transition.

I. Let us, in illustration, pass in review the work of some

[1] Delivered February 21, 1878.

Longleat Hall.

of the Elizabethan artists. We will take an early and a late example—Longleat Hall in Wiltshire, and Crewe Hall in Cheshire—both of them important and interesting structures. Longleat was built, it is believed, between 1567 and 1579. It is dignified in its architecture, and displays many of the characteristic signs of the times to which I have before alluded. Thus, although it retains some Gothic details, no one could mistake it for a Mediæval building. On the other hand, the absence of large single windows, with their cornices and pediments, would prevent an Italian of the Renaissance from claiming it as his own.

John of Padua.

Longleat was nevertheless, as is supposed, the work of an Italian, John of Padua, whose history is somewhat obscure. His name is to be found in warrants of King Henry VIII. and Edward VI. The troubled times of the latter reign did not admit of much culture of art, even if there had been any royal tendency in that direction. The great religious storm about to burst in persecution and bloodshed was already casting its baneful shadow on the land, and ecclesiastical disputes about religious doctrines, church ornaments, and vestments pushed other questions aside. The gaiety and magnificence of the Tudors seemed to have passed away, or at least to be in abeyance; and we pass in our artistic review from the days of Henry to those of Elizabeth, almost ignoring the brief and troubled existence of King Edward, turning away, perhaps not unwillingly, from the lurid glare which the flames of martyrdom cast only too conspicuously on the succeeding reign of his unattractive and morose sister.

His position as deviser of royal buildings under Henry VIII.

The change was great indeed. King Henry had a Tudor-like sense of his own importance. He would be a great king of a great nation. His court must be magnificent. If he would brook no inferiority to the Pope, he would, on the other hand, allow of no derogation from his own authority in things ecclesiastical as well as civil. He held intercourse with foreign artists, and sometimes, as when he went abroad to meet Francis I. at the Field of the Cloth of Gold, he sought to revive the Old-World glories of chivalry with its traditions of Mediæval art. Although an Englishman of Englishmen, King Henry saw that other nations had

advanced further than his own in the direction of artistic taste and refinement. He was therefore anxious to encourage progress in these matters, and with this view gave hospitality readily to foreigners such as John of Padua. We accordingly find this personage regularly installed at Court in virtue of a royal patent. It bears the date of 1544, and confers the new title of 'Devizor' of his Majesty's buildings. We have here evidence of something like the position of a modern consulting architect, exercising a control of design and superintendence, but not devoting himself exclusively to a single work.

Builder of old Somerset House.

We know less than could be wished of the doings of John of Padua in virtue of his public appointment; but in addition to Longleat he is said to have built old Somerset House, which has now entirely disappeared, to make way for the present building, designed by Sir W. Chambers, and completed not many years ago by the late Sir James Pennethorne. There is a considerable amount of resemblance in parts of the two designs of Longleat and old Somerset House which may betoken a common origin. John of Padua was certainly taken into favour by the Lord Protector Somerset, and the latter was engaged in building his palace during the period of his authority in the State. Several payments to the architect are recorded by King Henry and King Edward; but his relations to Somerset cannot be clearly ascertained, although we know that the moderate payment of 2s. a day was assigned to him in his character of 'Devizor,' probably a retaining fee to secure priority of service. The appointment was a new one, and was likely to arouse jealousy in times not too tolerant of foreigners.

The inner courts at Longleat.

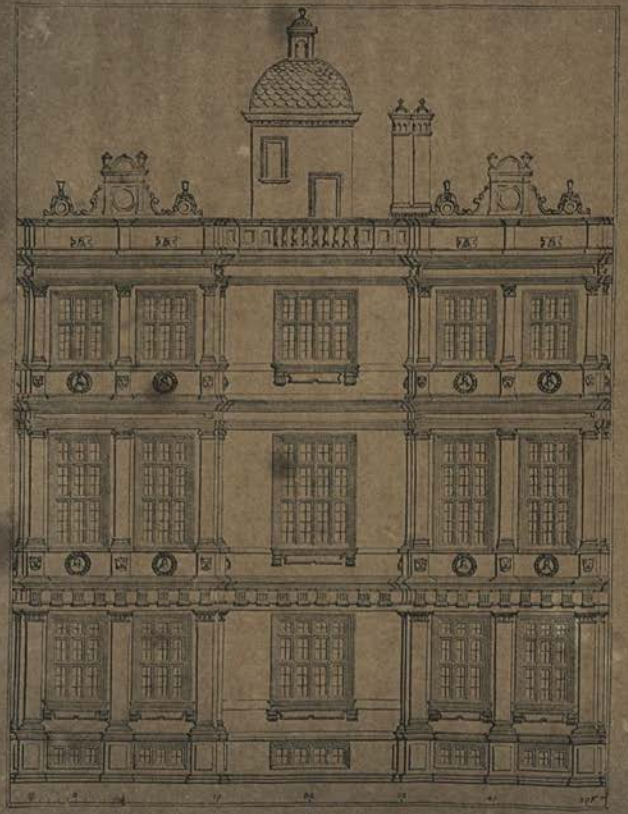
We may probably assume that Longleat was the work of John of Padua, and we shall find much in its design and arrangement which will serve to prove the extent of Italian influence on the principles adopted. The house is quadrangular on plan, with buildings arranged round inner courts of moderate dimensions. This was not a very usual form in England. We have, indeed, various examples of buildings erected around quadrangles of large size, as is the cases, for example, at Haddon, or in most of the colleges of Oxford and Cambridge. In such cases, however, the quadrangle

was the principal and the building the secondary feature. We are in a court, with buildings, often isolated, around us; not in a building with a court in the midst of it. The latter is a fair description of Longleat, and would apply also to most Italian palaces.

The open central space was essentially a southern feature, based on Roman customs, which latter were, as we saw in our examination of Pompeii, a continuation of Greek traditions. By a system of natural development, the atrium of ancient Rome became, as a matter of course, the cortile of the Italian palace. But if the smaller inner court be a pleasing feature in the South, productive of shade, coolness, and shelter from the sun, its advantages are more than questionable in northern climes, and it was not generally adopted by the Transitional architects of our own country. A square or oblong plan was the usual type in England, and, if more room were required, wings were thrown out at each end, with the space between them unenclosed. There was reason as well as good sense in this method of design, for unless the building was of the dimensions of a palace, any enclosed court could only be small. The sun would scarcely enter it, and it would become a source of damp, coldness, and discomfort to the rooms around it. In many of the cases in which such an arrangement has been adopted by the early builders the experience of subsequent inhabitants has led them to cover over the court, and so convert it into an integral part of the house.

Difference between Italian and English treatment of such courts.

At Longleat we have the open spaces arranged as an Italian would have built them; but not altogether used in a similar manner. The Italian palaces were for towns, but our great nobles have always thought more of their country seats than of their urban residences. The great palazzo in the narrow and crowded streets of southern towns, such as Rome, Florence, Pisa, Siena, seems to turn inwards with a proud disdain. The inner court was a badge of rank—a shelter from noise, heat, and bustle. With it the living rooms were naturally connected, and the open balconies and corridors around the court served as ante-rooms, as well as means of communication from room to room. In England the aspect of the house was outwards, and the windows were



LONGLEAT HALL.—Elevation of part of Façade.
From Fergusson's 'History of Architecture.'

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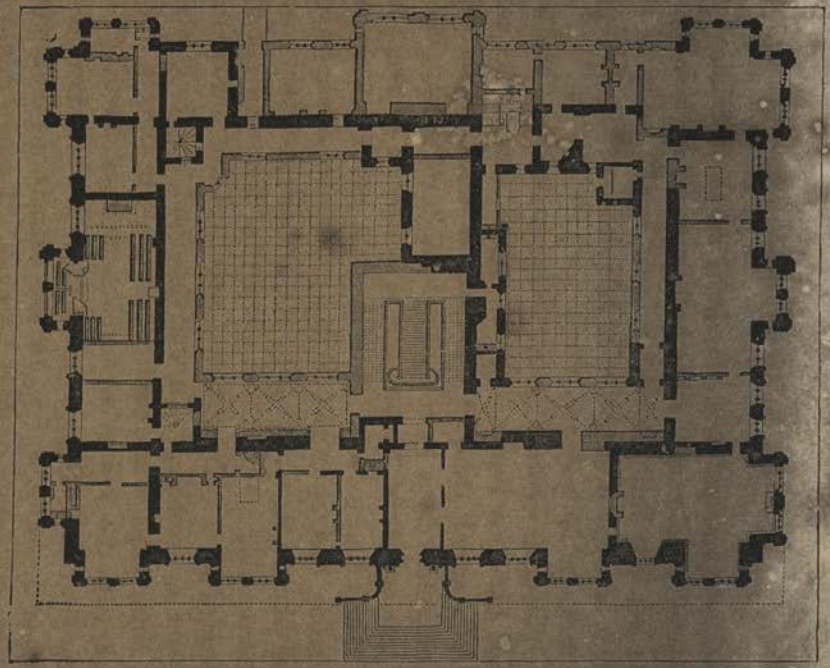

LONGLEAT HALL.—Ground Plan.
From Fergusson's 'History of Architecture.'

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so placed as to command views of the country around. This is the case at Longleat, and we should expect it to be so in a great English country mansion; for, although a foreign designer would necessarily be allowed considerable latitude in architectural design, we may be sure that the owner, who would have to live in the house when built, would insist upon a voice as to its general arrangement and aspect.

The Italianised elevation.

Passing from the disposition of the plan, we find in the exterior unmistakable evidence of Italian taste; indeed, the latter is so predominant that but for the mullions and a few other peculiarities, which may presently be noticed, we might almost fancy ourselves in presence of an Italian palace. We have the three orders superimposed, in accordance with the revived Classic custom: first, the Doric; then the Ionic; and lastly, the Corinthian. The pilasters are well executed, with diameters diminishing from the lower story to the higher. Each order has its appropriate entablature of architrave, frieze, and cornice, designed with due subordination of parts, and the whole is crowned by a regular balustrade. The pervading principle of the design of Longleat is that of horizontalism. Each floor is marked clearly and decidedly by the entablatures, and each story is distinguished by a different order of pilasters. There is a central entrance in a symmetrical front, and a very few additions and suppressions would give a complete Italian character to the whole composition.

On the other hand, we have the mullioned windows so dear to Mediævalists, and the projections common in Elizabethan work. These projections, indeed, are very pleasing, and serve to redeem the front from flatness and insipidity. They form bay windows, moreover, and so increase the internal space as well as the cheerfulness of the rooms, and they mark the Transitional character of the design.

Its general architectural excellence.

Taken as a whole, Longleat is one of the most remarkable and beautiful buildings of the period, and the details indicate a purity of taste rarely to be found in other examples. Whether it may be ascribed to John of Padua or not, the design is obviously the work of an architect of taste and refinement, who was well accustomed to Italian work, and probably acquainted with Italian artists. The

latter were, as we know, beginning to be largely employed in different countries, and some skilled architects, as, for example, Vignola, are known to have stayed in France and practised their art in that country.

Crewe Hall.

II. From Longleat we will now turn to Crewe Hall, in Cheshire—a much later example, but, nevertheless, not without some coincidences of principle, mixed with considerable individuality of its own. Crewe Hall was built from 1615 to 1636, about half a century after Longleat.

History of its founder.

It may be interesting to notice some points characteristic of the time of which we are treating in the career of Sir Randulph Crewe, the restorer of his family as well as the builder of its home. He was born in 1558, probably at Nantwich in Cheshire. Following the profession of the law, he became Serjeant about 1615, and was one of the earliest members of Serjeants' Inn, which has lately, as you are aware, been disestablished and disendowed by the serjeants themselves. Sir Randulph Crewe became Lord Chief Justice of the King's Bench in January 1625, and his portrait long adorned the walls of Serjeants' Inn. The times were full of trouble for public men, as Sir Randulph soon found to his cost, for he was dismissed from his high office by King Charles I., after a tenure of less than two years.

The historian Fuller thus records the fall of the Lord Chief Justice: 'King Charles's occasions,' he says, 'calling for speedy supplies of money, some great ones adjudged it unsafe to venture on a Parliament (for fear in these distempered times *the physic would side with the disease*), and put the king to furnish his supplies by way of loan. Sir Randulph, being demanded his judgment of the design and the consequence thereof (the imprisoning of recusants to pay it), openly manifested his dislike of such preterlegal courses, and therefore, on the 9th of November 1626, was commanded to forbear his sitting in the court, and the next day was by writ discharged from his office, whereat he discovered no more discontentment than the weary traveller is offended when told that he is arrived at his journey's end.'

The above account is not quite consistent with repeated attempts which were made by Sir Randulph to regain his

office. A powerful effort in his favour was made in 1641 by Mr. Hollis, whose speech on the subject adverts to the independence of judges, and the public dangers which would arise from corruption on the Bench. Hollis declares of Sir Randulph Crewe that 'that worthy reverend judge,' because he would not act 'contrary to his oath and conscience, drew upon himself the displeasure of some great persons about His Majesty,' and lost his place and the profits of his office for fourteen years, 'which, by a just calculation so long a revolution of time, amounts to 26,000*l.* or thereabouts.' He further summed up the case as follows: 'Sir Randulph kept his innocency when others let theirs go; when himself and the Commonwealth were alike deserted; which raises his merit to a higher pitch, for to be honest when everybody else is honest, when honesty is in fashion and is trump, as I may say, is nothing so meritorious; but to stand alone in the breach, to own honesty when others dare not do it, cannot be sufficiently applauded nor sufficiently rewarded, and that did this good old man do: in a time of general desertion he preserved himself pure and untainted.'

Notwithstanding such powerful advocacy, the Chief Justice remained in disgrace, although he had reason to believe that the Duke of Buckingham, who was supposed to have been the cause of his dismissal, had repented of the action, and had resolved to intervene in his favour, and procure his restoration to the Bench. All such hopes were ended, however, by the assassination of the Duke by the hand of Felton in 1628, and Sir Randulph Crewe remained, as before, an exile from royal favour.

The ex-judge lived thereafter in retirement, and devoted himself to the care of his estate, and the finishing and adornment of Crewe Hall. He died in 1645-6, at the ripe old age of 87, as his eulogist Fuller says, 'out of office, not out of honour, living at his house at Westminster, much praised for his hospitality.' Sir Randulph Crewe was buried in the chancel of Barthomley Church, in Cheshire. He lived to see Crewe Hall garrisoned by the Parliamentary troops, and the scene of a bloody contest in 1643, when it was taken by the Royal forces, and held by Lord

Byron for the king. It was surrendered again a few months afterwards by Captain Fisher, who had succeeded to the command after the raising of the siege of Nantwich and the discouragement of the Royalist cause.

The high position of the Chief Justice and his influential connections make it probable that he was well aware of the progress of other great buildings, such as Longleat and, as John of Padua was highly placed in the royal favour, he might naturally be acquainted with the works of [illegible] artist, and would thus be possibly influenced by his view[illegible] design.

Date of the original building.

The Crewe Hall was finished, as has been said, about 16[illegible] and the family possesses two interesting oil pictures painte[illegible] immediately after the completion of the works. These paintings enable us to form a clear idea of the hall as it existed when fresh from the hands of its founder. They are the more interesting because the building has passed through many vicissitudes.

Subsequent changes and re-building.

The outbuildings, containing the servants' offices, have been long since removed, and a new wing was added, about 100 years ago, to contain those rooms, arranged in a manne[illegible] more consistent with modern requirements. In 1866 a destructive fire ravaged the whole building and destroyed almost every part, except portions of the dining-hall and the comparatively modern wing. The destruction was so complete that the Hall, as it now exists, is less a restoration than a rebuilding, although the greatest care has been taken to recover the design of Sir Randulph for such of the work as it has been possible to restore. It is believed that all the rooms built by him, and which still exist, exhibit the original appearance, although with less roughness of execution and uncouthness of detail, particularly in respect of the human figure.

True principles of restoration and re-building.

Such peculiarities cannot, I think, be properly repeated in a modern reconstruction. They are a part of old work, and as long as they exist have an historical interest, which should not be tampered with; but when the fabric, with all its associations, has been swept away by fire and otherwise, it is not the part of the nineteenth century restorer to reproduce matters which at best were the weaknesses of his

CREWE HALL.—General View.

predecessors. He is in such cases free to select, and should not seek, by a clever imitation of bygone tricks of construction or design, to deceive the spectator as to the age of his own work, and so pass off the latter as something which it is not.

On the other hand, we cannot assent to the conclusion that all restoration is a wrong and unclean thing, not to be tolerated—a crime to be denounced and punished. An owner of a great historic mansion, born and bred in it, honouring and loving every stone in the fabric, is not to be told that it is gone from him for ever, that he must not venture to reproduce it, lest the restoration should shock the æsthetic sensibilities of some antiquary, the high sentimentalism of some 'superior person.' He may fairly reply, 'I shall follow in the steps of my fathers, I will restore what is good, I will discard what is bad or obsolete, and I will add all that I consider necessary in the altered circumstances of my own time. As I am not ashamed of my work, I will not seek to conceal it by artifice; but it shall stand out, in respect of date, as clearly as the work which it replaces, and which I have lost by no fault of my own. Such is, as far as I know, the spirit in which my forefathers worked; it was also the spirit of the best architects of old, and I will follow their lead.'

This appears to me a reasonable view of restoration of such buildings as Crewe Hall, and it has, as a matter of fact, been rebuilt and otherwise dealt with in accordance with such principles. The building, therefore, is only partially the same as that left by its original designers; but in the rebuilding their design has been reproduced wherever practicable, with such modifications as have been referred to, and the date of the new work is conspicuous in various parts of the house, so that there may be no room for error as to the time of its execution.

Comparison of Crewe with Longleat.

Let us now turn our attention to the original building, as shown to us in the paintings. We find the house externally a square block of about 100 feet square each way. The minor offices are separated in small gabled buildings, and there is a forecourt of moderate size, walled in from the park, and enclosing a raised terrace in front of the house.

The building is much smaller than Longleat, and less imposing in architectural character and detail; but it is impossible not to be struck with certain points of resemblance. We have the same grouping together in one large block, the same projections of bays and oriels. There is the same wealth of windows, with numerous mullions and transoms, and the same horizontal spirit of design. On the other hand, we may trace a more English feeling pervading the later example. The English architect of Crewe was less at home than the Italian designer of Longleat with orders and pilasters, and the use of them is consequently limited to the principal entrance. The well-known feature of the gable is also retained; and, though in the main building it appears in so subordinate a form that it may be said to exist under protest, in the outbuildings we have the gable freely used, both in its simple shape and in the curved and fantastic forms which succeeded the severer lines of the mediæval styles. The chimneys of red moulded brick, the mixture of brick and stone in the elevations, combine, with the peculiarities above mentioned, to give Crewe Hall a more homelike character than attaches to the more stately and palatial Longleat.

The plan.

Let us now pass inwards and examine the plan. For a block of 100 feet square some method of internal lighting was necessary, and we shall find that this was obtained by means of an internal court, a foreign feature rather than English, as we have already seen. The arrangement of Crewe Hall is, indeed, Italian in the same sense as that of Longleat, and possibly from the same causes, but the details are more in accordance with English customs. We have before noticed how the tendency arose to gather together the isolated buildings, at first scattered very much at random within the fortified *enceinte* of Mediæval castles. In great structures the apartments were then, as we know, built round quadrangles. The English manor-houses followed the policy of concentration by adopting a plan of centre and wings, while the Italian method favoured the small central court in the midst of a square block of building. We find at Crewe a Transitional character, which serves to mark the fusion of the two principles of English and Italian work.

CREWE HALL.—THE ENTRANCE HALL.

The general arrangement accords with the latter, while the disposal of the design in detail recalls, in more than one interesting particular, the arrangement of Mediæval houses.

The hall and 'carved parlour.'

Thus we have the hall as the great feature of the interior. It is, as of old, a room of great dignity and importance. Close to it is the parlour or withdrawing-room for the family, called by tradition the 'Carved Parlour.' The upper part of the hall is marked by the oriel and the dais, and at the lower end is an elaborate and handsome screen of carved oak. We find, in relation to this screen, the old arrangement of the passage with buttery-hatch behind it, communicating with the offices, and there are openings in the upper part of the screen which, taken in connection with the peculiar design of the top, lead irresistibly to the conclusion that above the passage there was the traditional minstrels' gallery overlooking the hall. The ceiling of the dining-hall is designed with great intricacy, and is executed in plaster, with pendants boldly treated. The walls are wainscoted to a height of about eight feet, and there is a large fireplace in the middle of one of the side walls. It was necessary for any person who wished to enter the house to pass through the hall, though he might obtain access to some parts of the building—as, for example, the chapel—by passing into and through the internal court.

The chapel

The chapel was evidently constructed in accordance with precedent, although it stands north and south, thus disregarding the practice of orientation. It has always been set apart for sacred uses, having been formerly consecrated by Bishop Bridgman in 1635. Although of small dimensions, the chapel possessed much interest. We may remark the division of the end farthest from the altar into two stories, one of which formed a gallery, an arrangement which was noticed on a former occasion, in reference to Mediæval buildings of the preceding centuries. The lower part under the gallery was screened off, as an entrance and ante-chapel, and in the gallery above it was the family pew, approached from the private apartments. The servants and others entered from the open court.

The semicircular window of the chapel is the most prominent detail of the north front, and in it we find the

only trace of Gothic traditions, apart from the general adoption of mullions and transoms throughout the building. Although these details are freely used, all the lines of the windows are regular, and all the openings rectangular; but in the chapel, and there only, we find the windows with arched and trefoiled heads, the arch being semicircular, and the cusping in accordance with late Tudor examples. The old style had still, we may suppose, a flavour of ecclesiasticism, and thus could not be denied a resting-place in the chapel of the mansion.

The intermediate or mezzanine floor.

The chapel was of the same internal height as the hall, and here we may notice another peculiarity in the distribution of the interior at Crewe. This is the introduction of an intermediate or mezzanine floor. The general design of the exterior indicates a ground story of considerable height. The large windows are evidently consistent with the existence of lofty apartments, and such are, indeed, the hall and the chapel, and, to a somewhat less extent, the 'Carved Parlour.' The rest of the story is, however, horizontally bisected by a floor; and on this floor were the bedrooms and private sitting-rooms of the family, placed on the same level as the gallery pew of the chapel, with which they communicated. By this arrangement a great extent of accommodation was obtained.

On the two principal fronts, namely, the southern and the eastern, the existence of the mezzanine floor is masked. The windows are of similar height and design to those of the hall, and the central division of the window is occupied by a panel corresponding with the floor within. On the northern and western sides the position of the latter is frankly recognised, and the two stories of ground floor and mezzanine have separate windows, arranged with distinct cills, in the ordinary way.

The staircase.

I have before alluded to the staircases of the Transitional era as having interest and beauty, and Crewe Hall is rich in the possession of one of the finest of existing specimens. It is entirely of oak, elaborately worked and carved, and of excellent and sound design and construction. It is a newel staircase, built round a central well-hole. The more ordinary plan of staircases was a system of long

CREWE HALL.—THE STAIRCASE.

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flights, few in number. Here we have a different principle, and it is interesting to notice again that it is a principle commonly followed by Italian architects. They did not, indeed, form well-holes, as at Crewe. This is peculiar to the time and country, and follows naturally from the material employed. The Italians built, for the most part, stone staircases, with a solid central pier, and stairs around it, in numerous short flights. Here also we have numerous flights; but the pier is replaced by a well-hole, with massive wooden newels at the four angles. The staircase at Crewe is not only beautiful architecturally, but is also very easy and convenient. It occupies, moreover, but little space, being not more than 24 feet square from wall to wall, while the height of the story is 20 feet. The shortness of the flights, and the frequency of the landings, secure great ease in ascending, and, from the compactness of the plan, no unnecessary distance is traversed.

I cannot advise young architects too strongly to study the planning and design of staircases. In domestic works they will often be tied down strictly to the necessary expenditure, without much margin for indulgence in architectural display; but the staircase is a necessity, and there is always in it a resource for the skilled artist. Every one knows the ugly and inconvenient chicken ladders which do duty as staircases in most modern London houses; and nothing, I think, marks more clearly than the design of the staircase the difference between an architectural composition and a builder's box.

The beauty of the staircase at Crewe has always been recognised by artists, and, I believe, the late Mr. Stanfield once adopted it as the subject of a great picture which he painted for a drop-scene at Drury Lane Theatre. With its handsome newels, carved and panelled; surmounted by quaint animals with heraldic cognisances; its richly wrought balustrade and picturesque arrangement; this staircase is certainly one of the most interesting examples of the skill of the builders of the seventeenth century, both in the art of design and the science of construction.

The staircase led to the great reception-rooms and principal guest-chambers. These were all on the first

The gallery and guest-chambers.

floor, and looked outwards, in the English manner, commanding distant views. The whole of the northern side was occupied by the usual long gallery, a charming room, well adapted for reception or for exercise. The other apartments were principally sitting-rooms, and were approached through each other—an arrangement which our ancestors appear to have thought unobjectionable. There were a few attics and small bedrooms for servants, but most of the latter must have been accommodated out of the house.

The ceilings generally are of great elaboration, and in some cases of much beauty; and there are large and curious chimney-pieces reaching up to the ceiling. One of these, in a guest-chamber which the late fire did not reach, represents, in a rude manner, the murder of Abel by Cain—not a very cheerful subject, one might think, for a nervous visitor, fresh from the perils of the road.

Attention to comfort and excellence of workmanship.

We find in the whole arrangement of Crewe Hall an amount of domestic comfort which was highly characteristic of the progress of the country in prosperity and attention to the liberal arts. The execution of the ornamental details was good, particularly the carpenter's work; and although the sculpture of the human figure was strained and uncouth, as was usual at this period, there was underlying the whole work a motive principle, the development of which, by workmen skilled in artistic taste, would have produced a result of a highly satisfactory character. As it was, and notwithstanding all drawbacks, Crewe Hall was a splendid specimen of the taste of the Transitional epoch, a noble example of the mansion of the old English gentleman.

Formality and symmetry of esign.

It is curious to notice the formality which had now taken possession of such structures and their adjuncts. It was the reaction, probably, from the picturesque irregularities of Mediæval work, although this quality in the latter is far from being as common as is often assumed. The Mediæval architects did not, indeed, shrink from irregularity, whether of plan or elevation, when circumstances naturally gave rise o it; but they did not gratuitously set themselves to work to design irregularities and invent picturesqueness, as many of their modern imitators would seem, by their practice, to

fancy. The Elizabethan style, again, did not forbid elasticity, although such buildings as Longleat and Crewe illustrate the taste for more formal design which was becoming fashionable.

Shown even in terraces and gardens.

It not only pervaded the house, but extended to the adjoining grounds. It displayed itself in formal plantations and terraces, following, very evidently, an Italian impulse. The terrace at Haddon exhibits some original details, but the Elizabethan architects usually borrowed balusters, terminals, and piers, from foreign models. Thus, at Crewe we find a terrace with balusters of forms common in Italy, and divided into bays, according to well-known precedent. The love of formality and imitation passed from the house to the garden itself, which was laid out in stiff forms and patterns, with terraces ranged one above the other, approached by steps and decorated with balustrades. Formal enclosures were favoured with bowling-greens, labyrinths, and mazes, and it seemed the object of man to put nature in fetters. Even the plantations were to be reduced to obedience, and were clipped and tortured into fantastic shapes. Hedges became walls, and streams canals. There is a very interesting example of an Elizabethan garden at Levens in Westmoreland. Here the trees and shrubs are made to resemble every shape but their own, and the aspect of things has been maintained by the owners without alteration, from the time of the original foundation of the place.

The old gardens at Crewe.

You will notice many instances of similar principles of formal arrangement of the grounds at Crewe; not, indeed, as it at present exists, but in the paintings of its original condition. In these pictures you find the stiff garden, with flower-beds of geometrical patterns; there are straight walks, a rectangular fish-pond, and high enclosure walls, instead of hedges. The offices are in detached buildings, each made to resemble the other. A straight walk gives approach to the house, through a square courtyard. A central flight of steps leads to the hall door, in the middle of the façade, while on the right and left there are regular balustrades, with stone piers, and ball terminals upon them. At the other end of the straight walk, and at its point of junction with the park, there is shown in the picture an arched gateway

of interesting design. The arch is semicircular, and the opening is closed by solid-looking and richly moulded wooden doors. Detached columns flank the opening on either side, and the whole is surmounted by elaborate scrolls, into which are worked the heraldic cognisances of the family. On each side of the gateway are brick walls, extending to the right and left, so that the whole enclosure is about equal in width to that of the house. At the angles there are small buildings or outhouses, designed in strict accordance with each other.

These buildings, together with the archway and enclosure, have long since disappeared, and the grounds around the hall were laid out in a more modern fashion, some years ago, by the elder Nesfield. The arrangement of the forecourt could indeed scarcely have been retained as tolerable; for, as the archway was not wide enough to admit carriages, no one could have driven up to the front door; an arrangement not very suitable now, though it was probably convenient enough in the days of sedan chairs and running footmen.

At Crewe, as at Longleat, the Italian taste for symmetry had succeeded to the irregular picturesqueness of Gothic architecture, and these were but instances of what was doing elsewhere. In all parts of the country a similar movement was apparent, coupled with many lingering attempts to retain the beauty of the past—to combine the Old with the New.

aste for ofuse de- ation.

A taste for profuse internal decoration prevailed—a decoration not of the true artistic character, which calls for the co-operation of the sister arts of painting and sculpture (and without which, be it observed, there can be no decoration worthy of the name); but a decoration of masons, plasterers, and carpenters, with much striving in the dark, and half realisation of good intentions. The walls of rooms were handed over to the carpenter, and he covered them with oak panelling, generally extending from floor to ceiling. In many cases, as in the 'Carved Parlour' at Crewe, he shared his task with the plasterer, and allowed his comrade space for a deep and elaborate frieze above the panelling. Here, accordingly, were gods, and goddesses, or

vices and virtues, displaying a splendid ignorance of the laws of anatomy and of the human form divine. There was, however, frequently much grace and skill in the design of the whole, both in its general composition and in the disposition of the parts; and when scroll-work was employed, it had a curious intricacy, and a characteristic elaboration, which produced a handsome effect. The object seems to have been to cover the whole surface of the walls with constructed decoration. Nothing was left to the taste of the future occupants. The builders had everything their own way, and wished to turn out their work complete in its parts.

Modern decorative taste.

The taste for profusion of ornament is characteristic of the Elizabethan style. It passed away, and was by-and-by succeeded by the baldness of the Georgian era. Now, indeed, amongst ourselves, the wheel has again turned round, and we hear of 'decorative artists,' 'art manufactures,' and 'art workmen' in all directions. Everything must now be reversed. Our ceilings must be black, and our floors white; balusters must be turned upside down; fires placed on the floor; our mahogany sideboards banished, and dressers, which seem to have been borrowed from the kitchen, put in their place. Plate-glass, we are further told, is not 'æsthetic.' If it cannot be avoided altogether, it must, at least, be degraded into small divisions, separated by clumsy and heavy bars. Better still if it can be altogether obscured by coloured patterns and devices. Cheerfulness and light are beneath the notice of the 'artist-decorator'; but, as a compensation, he will cover every space with daisies and pomegranates, and will perhaps even persuade a whirling flight of birds of paradise to settle, in impossible positions, on walls, ceilings, shutters, and doors. Every space must be decorated, and nothing left for repose.

Its points of weakness.

Now I will not for a moment defend the cold dreariness against which all this may be regarded as a protest; but still less can I regard such over-elaboration as a healthy movement. It seems to me, indeed, something of an anachronism, a return to Transitional profusion, inconsistent with the claims of pure art, and the simple and refined manners of the best modern life. High-class paintings,

engravings, and sculpture are the true decoration of our dwellings; and no style of architecture can be permanently accepted which does not provide a place for them, and receive them with a hearty welcome. If the large sums daily lavished on commonplace decoration were applied with a higher aim, we might hope for a time when a school of mural painting and sculpture should arise among us, of sufficient importance to absorb into its ranks many a young artist of promise, who now may sigh in vain for an opportunity for the exercise of his powers, while he sees that which might be his legitimate province invaded by those who find it profitable to talk a jargon of art language, and make of fashion a profitable trade. It is pitiable to think of the great opportunities for the employment of the highest forms of art which are daily thrown away in connection with our public buildings alone; and while this is the case, no amount of eccentric admiration for eccentric things will take away the reproach that we are still, as a nation, in the rear rank of artistic progress.

Architectural retrospect.

III. This, however, is a digression from my subject. Let us, therefore, briefly review the progress we have made in the consideration of our subject. Having traced the gradual changes of domestic architecture in England from Roman to Saxon days, we have noted its advance through the succeeding centuries, which marked the golden age of Gothic art.

This wonderful school gave us masterpieces of construction and marvels of design. Nothing in the accessories of our architecture was neglected, and the same principles of design which ruled our churches, abbeys, and palaces, were illustrated in the textile fabrics and furniture of the day. Every part combined to give effect to the whole, and the custom of each period was as absolute in its sway as the dictates of modern fashion. In the triumphs of Mediæval architecture, however, the sister arts had an inadequate share. Was this an accident only? Did it arise from any temporary paucity of artists? Or is the deficiency in any way a natural consequence of the governing principles of Mediæval design? This is too important an inquiry to be pursued at the end of a lecture; but it is one which must be faced, and

must be answered satisfactorily, if our architecture of the future is to be based on lasting principles.

In our present inquiry, we have arrived, as it were, at a table-land of art; where we may pause, and whence we may look around us, before continuing our journey. We find in the Transitional architecture of the Elizabethan and Jacobean structures a very battle-ground of opposing principles. It would not have been English, if it had received new ideas, and parted with old customs, without a struggle. Our fathers, like ourselves, liked to be masters in their own house, and thus we find old ways and habits asserting themselves in the arrangements of their architecture, even when foreign fashions were half-welcomed.

As the transition passed, compromise was abandoned. Foreign models were mainly or absolutely followed, and our art became involved in a conflict of ideas and confusion of practice, from which it has never emerged. We may, perhaps, find something to deplore in a state of things which may appear to some an artistic anarchy—an anarchy, moreover, which, contrary to historic analogy, does not seem likely soon to submit to the sway of a dictator; but, it may be, we shall derive consolation from the reflection that independence is a necessary concomitant of freedom—freedom of mind and body—freedom of science and of art—a freedom for which men have fought and suffered, and which we could as ill relinquish as the air we breathe.

LECTURE VIII.[1]

ENGLISH RENAISSANCE.

The effect of the Renaissance in England.

I PROPOSE in this lecture to notice the influence of the Classical revival abroad on the architecture practised in England immediately after the Elizabethan age. In treating of the latter, we found, as you may remember, traces of Italian influence, in both plan and elevation; particularly in the case of Longleat, attributed, as it indeed is, to an Italian architect. We shall find that this was the beginning of a movement, which was for the time to carry all before it, and to break completely with the Mediæval architecture of England.

Hitherto we have had to deal with a fusion, a Transitional period of doubt and change; but in the days of our Stuart sovereigns, the Renaissance, which had started from Italy, gained a footing in England, which it has never lost. In dealing with the new state of things in England our minds naturally revert to two great artists, whose names are inseparably connected with the architecture of their time. I allude, of course, to Inigo Jones and Sir Christopher Wren.

Inigo Jones—his origin and artistic education in Italy.

I. With reference to Inigo Jones, our information is not as full as could be wished. Descended from Welsh parents, and born in 1573, he is believed to have been brought up as an artisan, and was apprenticed to a joiner. He must have been unusually intelligent, for on attracting the notice of a nobleman (Lord Arundel, or Lord Pembroke), the latter became his patron, and sent the young man to Italy to study. Here he found the Renaissance movement in full activity. Inigo is said to have visited Italy about 1612, when he was nearly forty years of age. His Italian

[1] Delivered March 7, 1878.

tour was not a long one, for he had to return home quickly, in order to assume the office of surveyor to Henry Prince of Wales, which the influence of his patron had obtained for him. He reached Italy at a time of great architectural activity, and must have shared in the enthusiasm excited by the approaching completion of St. Peter's, the dome of which had been finished in 1590. He probably agreed in Michelangelo's admiration for Bramante, as he henceforward cast in his lot with the architects of the second or Roman period of the Renaissance.

His popularity on his return.

On the return of Inigo Jones to England he found favour and honour awaiting him. Society was stirred by the reports which came from abroad, of the success of the new manner of architecture. Latin and Greek literature was found in many cultivated English homes of the gentry and nobility. King James had already earned a name for scholarship, which entitled him to be known to history by the nickname of 'The Royal Pedant.' The Reformation had broken the continuity of tradition, and men were asking for change and novelty.

In such a state of things, the advent of an accomplished artist, fresh from what seemed the source of inspiration, a man vigorous and earnest, and inspired with thorough confidence in his convictions, was an event of the greatest interest. Here was a great opportunity for the enthusiastic architect. Inigo Jones came as a prophet from afar—a master demanding attention—a lawgiver from some sacred mountain. He speaks thus of himself: 'Being naturally inclined in my younger days to study the arts of design, I passed into foreign parts, to converse with the great masters thereof in Italy; where I applied myself to search out the ruins of those ancient buildings which, in despite of time itself, or violence of barbarians, are yet remaining. Having satisfied myself in these, and returning to my native country, I applied my mind more particularly to architecture.' From this account we notice, first, that Inigo left England as a lover of art, but not as an architect; and secondly, that he underwent the same process which had led Italian architects to the Renaissance, by a study of the remains of their ruined buildings, relics of ancient Rome and Greece.

Inigo Jones preserved throughout his life his original catholicity of taste, for he engaged in a variety of artistic pursuits, including designs of scenery and decorations of the favourite masked entertainments of the day; he was, indeed, poet, architect, machinist, and painter.

His appointments and buildings.

Rejoicing in Court favour, he became 'Inspector-General of the Royal Buildings,' and in that capacity was called upon to design a new palace at Whitehall, of which a small fragment only has been erected. This portion of the design, which is known as the Banqueting-house, was commenced in 1619, and is said to have cost about 15,000*l*. There is some interest just now in noting workmen's wages in those days. Mr. Peter Cunningham tells us that at Whitehall they were as follow: Master mason, clerk of works, or inspector, 4s. 10d. a day; masons, 1s. to 2s. 6d., according to skill; carpenters, the same; and bricklayers, 1s. 2d. to 2s. 2d. These prices were fixed by the authorities. No change was permitted during the progress of the building, and power was given to compel workmen to enter the works, if necessary. The age of legalised strikes had not yet arrived.

The reputed works of Inigo Jones are numerous; so much so, indeed, that we cannot accept, without hesitation, many that are ascribed to him. The Banqueting-house, Whitehall; St. Paul's, Covent Garden; a chapel in Somerset House, since destroyed; the great western portico at St. Paul's; and the charming little water-gate, now left with culpable neglect in a hole on the Thames Embankment, are admitted instances of his work in London. Inigo Jones also designed the Duke of Devonshire's villa at Chiswick, Wilton House, and various houses of noblemen in the provinces. His prosperity was clouded by the troubles of the times, and he lived to see the son of his original patron, King James, step from the palace he had designed to meet death on a scaffold by public execution. The artist had fallen on evil days; a courtier and a Roman Catholic, he was, in both qualities, obnoxious to the ruling powers. He had embittered his life also by personal quarrels, particularly with Ben Jonson, and a career which began with exceptional brightness, ended in gloom and disappointment.

The works of Inigo Jones generally exhibit both origin-

His originality and taste in design.

ality and taste. Although he had formed his style on that of the Italian architects, and notably followed Palladio, he did not at all blindly copy their works. Thus he was far less apt to use applied columns and pilasters than they were. At Greenwich Hospital, which has been ascribed to Inigo, there is an enormous order running through two stories, and coarse in its proportions; but it is very doubtful whether this was really his own, and in all probability it may have been the work of some follower or would-be imitator. We may notice in most of the designs of Inigo Jones an absence of affectation, all the more remarkable when we bear in mind the extravagances of the Transitional work of the Elizabethan and Jacobean architects, to whom he succeeded; such as might be seen, for instance, in Holbein's gateway at Whitehall. His buildings often displayed a dignified plainness, with orders used sparingly, for porticos or other important features.

The portico at old St. Paul's.

The portico was so favourite a feature in Classic days, that it was only natural, in the first fervour of imitation, to seize upon and adopt it for all kinds of buildings, even in positions where it was very unsuitable. When it became necessary to repair the west end of St. Paul's Cathedral, before the Great Fire, the idea of adding a portico was suggested by Inigo, in accordance with the then fashionable taste. He had no sympathy whatever with the old Gothic cathedral. He fancied, probably, that so barbarous a structure, as it seemed to him, must soon be swept away by the advancing taste for the revived Italian style, of which he was the advanced practitioner. However this may have been, he proceeded to build, at St. Paul's, a Corinthian portico, of much grandeur, and, apart from its incongruity, of considerable beauty. It had eight columns, each 47 feet in height, with a horizontal entablature without a pediment. It perished in the Great Fire with the building to which it had been added, and the site was thus cleared for new St. Paul's, the great achievement of Sir Christopher Wren.

The Banqueting-house at Whitehall.

The Banqueting-house at Whitehall is in some matters, as in the free use of the orders, an exception to the usual principles of design which were followed by Inigo Jones, and it even exhibits points of detail which may be referred to the

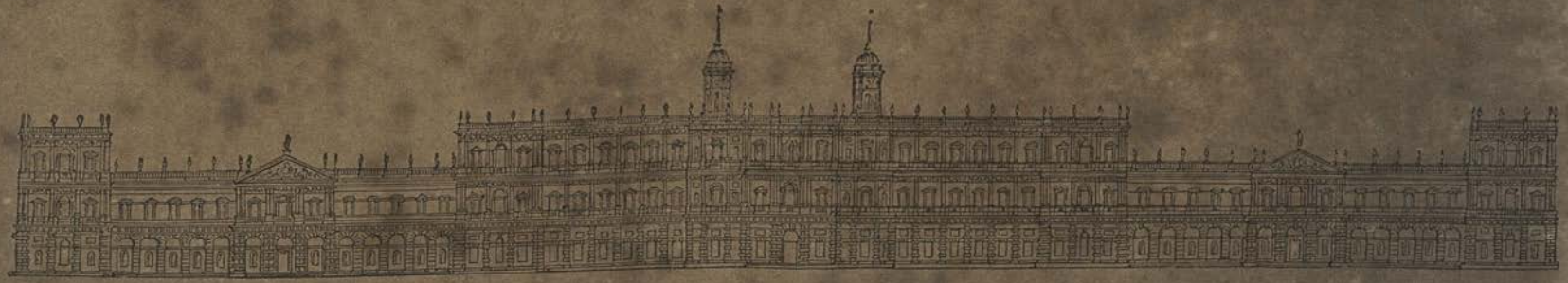
influence of the freer Transitional styles, which have lately passed our review. It was one of our artist's earliest designs after his return from Italy; and although he never wavered in his attachment to Classical art, his practice was probably less firm and assured at this period than it subsequently became. In his buildings, as a rule, the horizontal principle is made to prevail. String-courses and unbroken cornices are employed, and grandeur is sought for in simplicity. In some cases bold roofs appear, simple and unbroken in outline, with projecting eaves and cornices, casting deep shadows. At Whitehall this is not the case. The whole surface is broken up with a multiplicity of projections, and the vertical principle prevails over the horizontal, in a manner more appropriate to a Gothic than to a Classical building. With the exception of a partially unbroken basement, every detail of cornice and entablature seems to speak of action rather than repose; and even the sky-line would have been broken by statues, if the building had ever been finished.

The great design for the palace.

In criticising this example of the talent of Inigo Jones, we must of course bear in mind that it is only a very small fragment of a grand design, and if the whole had been carried out, the effect of the great mass would probably have tended to subdue any undue prominence of partial detail.

The great palace at Whitehall was indeed designed on a scale much too grand for adoption by a country like ours, which is ever slow to entertain great artistic ideas. It would have been too much for the present day, and for the hard times of Charles I. was altogether inappropriate. The design remains to us, however, a magnificent conception of its architect, and, if it had been executed, would have given us one of the finest edifices in Europe. The building would have been 874 feet long, towards the river; and no less than 1,152 feet in depth, with a great central court, about 750 feet long by 378 feet wide. The river front would have been nearly the same length as the present Houses of Parliament, and the latter would have been greatly exceeded in depth and total size by Whitehall Palace. The whole conception showed the skill and taste of Inigo Jones; and the arrangement of the masses and the angles, and the disposition of openings and

DESIGN FOR WHITEHALL PALACE. By INIGO JONES.—River Front.



DESIGN FOR WHITEHALL PALACE. By INIGO JONES.—Westminster Front.
From Fergusson's 'History of Architecture.'

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piers, with the play of light and shade throughout, would have produced a splendid architectural effect.

An original feature was the so-called Persian court, which was circular on plan. Here statues were to serve the place of columns, as in the Erechtheum at Athens. There were to be two stories in height, and in the lower floor the Doric style would have been used, with statues of men; while on the story above, there were to be female figures and Corinthian details.

In the present Banqueting-house, we may see the nature of the work which the architect contemplated; but he intended part of the structure to have had three stories instead of two, so as to avoid sameness and monotony of outline. This fragment of the grand design illustrates the attention given to proportion by its designer, for the balance of voids and solids is one of its most pleasing peculiarities; while it is also handsome as a whole, without being overdone in parts. I cannot now pass in review more of the works of Inigo Jones; suffice it to say, that they all show a sufficient amount of skill, and even of genius, to entitle him to be called the father of the English Renaissance.

Sir Christopher Wren.

II. In the troubled times of civil discord, the arts are not likely to flourish, and the office of Inspector-General of the Royal Buildings disappeared with Royalty itself. After the Restoration, however, arose a new period of building and improvement, and with the opportunity came the man. This was no other than Wren, who soon occupied the place vacated by Inigo Jones, and surpassed him in the number and importance of his architectural works.

His education and tastes.

Unlike his predecessors, Wren had advantages of birth and education. He was an accomplished scholar and a learned mathematician. He was early appointed to take charge of St. Paul's, and was engaged in repairs of the fabric at the time of the fire. When this catastrophe occurred, Wren was abroad, studying, it may be presumed, the works then in progress on the Continent; but his journey was stopped at Paris by the news of the destruction of London, and he hurried back to England without going further.

It is much to be regretted that Wren was thus deprived

of the opportunity of visiting Italy, and of making acquaintance, like Inigo Jones, with the leading architects of the day. It was probably due to the calls made upon him, in consequence of the Fire, that Wren determined to apply himself to architecture; for his natural bent was certainly towards science rather than art. It was in any case unfortunate that he should have been thrown so suddenly into architectural activity, and have had cathedrals, churches, and other buildings innumerable, placed at once in his hands.

St. Paul's.

It was not possible for one man, however ably seconded, to do his best under such pressure, and it is very remarkable that Wren was able to produce the results which he actually achieved. The story of St. Paul's is doubtless known to many of you, and I will not repeat it here. Suffice it to say that the result, as a whole, is a splendid evidence of Wren's genius. Hampered in various ways, with but little encouragement and many difficulties, he gave us a building which, in some respects, is without a competitor. St. Paul's has not the dimensions nor the internal magnificence of St. Peter's at Rome, but it far surpasses the latter in beauty of exterior. The dome of Michelangelo is splendid within, far more splendid than Wren's; but it has little external effect, and none at all from the Piazza, whence it is concealed by the rococo front of Carlo Maderno. At St. Paul's the dome is lifted up in dignity. It is supported by the western towers, which contribute, by contrast, to its effect, and the whole external view of the cathedral is very striking and satisfactory as an architectural monument.

His attempts in Gothic.

It must be borne in mind that Wren was called upon to undertake a task of no ordinary difficulty. The style of architecture which was fashionable was not the style in which men had been accustomed to work, and least of all were they prepared to see cathedrals and churches built in any other architecture than Gothic. Wren was ready to apply the new Renaissance taste to all buildings, but, when he attempted any imitation of Gothic forms, his usual success failed him. Of such attempts, the western towers of the Abbey at Westminster are an example, and at the same time a warning. At St. Michael's, Cornhill, at St. Dunstan's-in-

the-East, at Warwick, and a few other places, Wren adopted Gothic details; but his heart was not in his work, and he was probably controlled as to their use by special circumstances.

Among his Classical designs for secular buildings, the library of Trinity College, Cambridge, deserves notice. It is simple in principle, consisting of two stories, each of which is arcaded, with an attached order. The upper story is devoted to the library, while the ground-floor is open, as a cloister. The design is appropriate for the purpose intended, and, notwithstanding its simplicity, is pleasing and dignified in effect.

Library at Trinity College, Cambridge.

Perhaps, however, the most original and successful of Wren's works is the tower and steeple of Bow Church in the City of London. The Renaissance was hardly a tower-building, and certainly not a steeple-building, style. Its application to such a purpose was consequently an experiment. Wren faced the difficulty, however, and produced a very beautiful work. Starting with a tower of much plainness, he made the base of his spire circular on plan, and surrounded it with columns, giving a great play of light and shade. Above this Corinthian peristyle a range of boldly moulded trusses intervenes, as an introduction to the lantern above, which is in turn surmounted by a short spire. The effect of the whole structure goes far to prove that, in the hands of genius, even an intractable style may be so handled as to produce beautiful results. The steeple of Bow Church is by far the best of the many similar structures designed by Wren, and it is perhaps the best of its peculiar style which exists anywhere.

Bow Church.

That Wren was a scientific architect is manifest, not only from the skill displayed by him in construction, as at St. Paul's, but also from the cleverness and ingenuity of his plans. Among the latter, the church of St. Stephen, Walbrook, holds a foremost place. Although the dimensions are small, the ingenuity of the arrangement of the internal columns is such that a great impression of size is produced, together with much variety, and a most pleasing effect of chiar-oscuro. The columns in the body of the church support eight arches, so planned as to form an octagon, from which a dome springs. The latter is enriched

St. Stephen's, Walbrook.

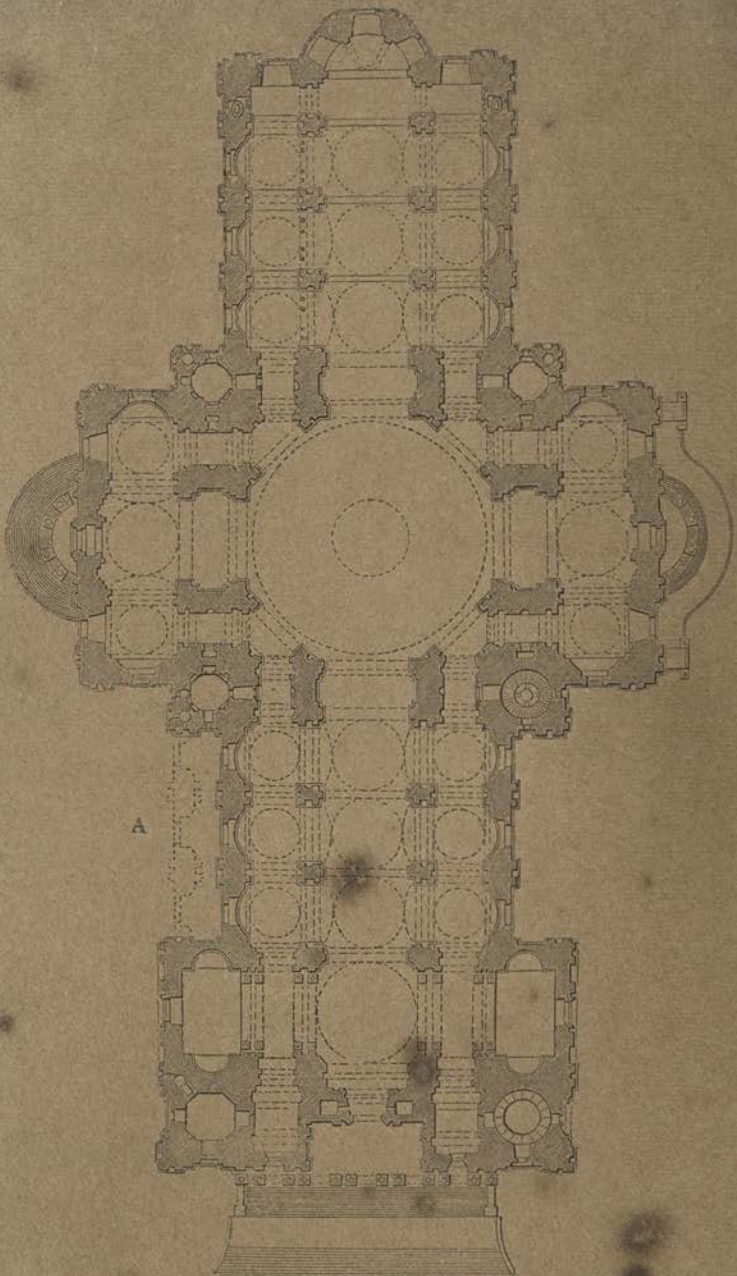
by panelling, and is lighted by lunette windows in the octagonal stage. It is not easy to describe the merits of this very clever interior, and I strongly advise students to go and see it for themselves. Wren's weakness here, as elsewhere, was in detail; and this was probably the result, in many cases, of undue haste, and of the pressure of a large number of important works at the same time. In Grinling Gibbons he was fortunate enough to find a most accomplished carver, and the amount of work executed by the latter was very great; but in many instances his assistance could not have been available, and the ornamental details of Wren's churches are often rough and crude, though seldom destitute of a certain boldness and largeness of effect.

Great plan for re-building London.

Wren himself was an artist of grand ideas, as was shown when he was called upon to produce a plan for rebuilding London. The state of things previous to the Fire has been before described, with the wooden houses projecting story beyond story, and the narrow streets inviting plague and conflagration. These had been destroyed, and a great opportunity had consequently arisen for the improvement of the metropolis.

Wren proposed a system of radiating streets, and a great river embankment. On the latter he would have placed the rebuilt halls of the City companies, and would thus have lined the river with palaces. His general plan has been criticised as too formal, and as having a tendency to produce the dull monotony seen in some regularly built cities, such as Turin. In truth, however, Wren's proposals are scarcely fairly treated in this sweeping criticism. Although he would certainly have given us spacious and direct thoroughfares along the chief lines of traffic, he by no means followed any uniform treatment throughout, and the different levels of London would in themselves have been a great safeguard against sameness of effect; while, as regards the river, its curves and reaches would have exerted a similar influence.

On the whole, it is to be regretted that Wren's plan was abandoned, and that we have consequently been left to attempt to remedy, partially, and at enormous cost, the evils, many of which he would have removed once for all. His plan shared the usual fate of all comprehensive schemes



ST. PAUL'S CATHEDRAL.—PLAN.
From Fergusson's 'History of Architecture.'

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ST. PAUL'S CATHEDRAL.—Half-Elevation, Half-Section of Dome.
From Fergusson's 'History of Architecture.'

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with us, and was abandoned in face of the opposition of the private interests, which it aroused.

His scientific skill.

Wren's scientific skill was apparent in all he did, from the often-abused cone in the dome of St. Paul's, to the cleverly designed wooden roof of the Sheldonian Theatre at Oxford, where a space of 80 feet wide is covered by a single span.

As to St. Paul's, the great external effect of the dome, apart from beauty of outline, is due to its height, while the internal dome is certainly quite high enough, and indeed perhaps too high for a perfectly satisfactory result. There is a difference of height between the inner and the outer dome of some 50 feet, and Wren filled the intermediate space with a brick conical structure to support the stone lantern above. This arrangement of a double dome has been denounced as an unworthy expedient and a constructional falsehood. What, however, was Wren to do? Was he to ruin the unrivalled effect of the exterior of the dome by lowering it? or was he to raise the inner dome, which is already too high? If he was able to avoid both horns of the dilemma by an expedient of most ingenious construction, it is difficult to see why he should be blamed, especially by those who detect no impropriety in a Gothic spire or flêche, and who consider a high wooden roof, built over a stone inner groining, an admissible and praiseworthy manner of building.

Difficulties of the English compared with the Italian Renaissance.

In estimating Wren's claims, allowance must be made for the circumstances of his time, the novelty of the application of Classic forms of architecture, the want of skill in such work of the artificers employed, and the sudden and immense demands on the architect's ability and taste. When these facts are borne in mind, the verdict of history upon the career of Sir Christopher Wren will not be doubtful. To him, and to Inigo Jones, the Renaissance in England owed its first vigour, and their works have not as yet been surpassed.

It must always be remembered that our two great English architects were placed at much disadvantage, as compared with the architects of the Italian Renaissance. The latter had not to look abroad for information or precedents; they were at home with Italian forms and styles. Above all, they were part of a powerful and united band of

artists, bound together by common associations, and aided by a popular enthusiasm for literature and the arts, whether painting, sculpture, or architecture. In this country, the impulse towards the employment of Italian architecture came from above. Inigo Jones was emphatically a courtier, and Sir C. Wren owed his great opportunities mainly to royal influence. England has never seen a republic of art in the same sense as Italy. It has been her lot to follow, and not to lead; and it was impossible for her to enter into the feelings of delight with which the Italians saluted Rome as 'mistress of the world' in law, religion, and in art, with an outburst of sentiment, at once artistic and patriotic.

Want of thorough union of the arts.

Although, however, the new manner was tardily adopted in our own country, it made its way surely and thoroughly, and, until times comparatively recent, our principal buildings have been designed in some form of Classical art. They have however, almost always lacked the distinguishing merit of Italian work, the association of the arts. They have had no Michelangelo to make their walls eloquent, and their ceilings glorious. The charm of a Raffaelle, and the grace of a Leonardo, have been denied them, and thus the English Renaissance has been a movement but partially completed.

The Italians had always been accustomed to wealth of decoration, and even in the Mediæval buildings, as, for example, the Cathedral of Siena, every part glowed with colour and ornament. They loved detail, and lavished their wealth of art on every separate part of the structure. At Siena, it is not the building itself, striking though it be, that delights the spectator, so much as the beauties of parts, isolated apparently, and full of variety, but at once contributing to a richness of general effect, and presenting attractions of special interest, to be sought in vain in structures more completely dominated by a single mind.

Carelessness of artistic detail.

As a contrast to such principles, we have but to consider our own St. Paul's. Here we have the governing architectural thought made so clear that nothing is left to the imagination. A few large and not very refined details are repeated, but not to a sufficient extent to give either the idea of space or mystery. Large as it is, the interior suffers in apparent size from the want of detail. A few features,

however grand in themselves, can never produce the effect of small parts often repeated, as in the case of the Gothic cathedrals. This was one of the conclusions which the Renaissance architects were slow to accept, with the frequent result of comparative failure, particularly in their architecture of interiors. The absence of internal detail was, to a great extent, forced upon them by the painters. The latter required great spaces for their works, and dictated their own conditions. Painting was emphatically the great art of Italy, and to it all was subordinated. It was to the Italians all that sculpture had been to the Greeks, and it ruled supreme over the Renaissance. In England things were otherwise; not only had the northern principle of Mediæval architecture varied essentially from that which prevailed in Italy, but the then existing circumstances of the country were altogether different. The scientific working out of a single design in the great buildings of England allowed comparatively little scope for individual detail, whether of painting or of sculpture.

Puritanism in religion.

Although we had shared in the religious development, which had everywhere filled the churches of the old faith with shrines, images, and pictures, these artistic accessories to architecture had been less willingly accepted here than in Italy, and at the time of the Renaissance had been roughly thrust out by a burst of iconoclasm. Wren was consequently not free to do his best, but had to reckon with the Puritan view, that art and religion were opposing foes. This is a creed which has ever had supporters, and it is well for us to ask, Is it true? If it be so, we must conclude, in all sadness, that a Christian man ought not to be an artist.

Early Christian feeling about art.

At the outset of Christianity, when the neophytes of a new faith hid themselves among the rocks, and crouched in catacombs, it was natural that the spiritual life should claim their entire thoughts, to the exclusion of all else. Revolting with their whole soul from pagan practices, all that savoured of these was to them necessarily odious. The early Christians were engaged in a battle for existence—a mortal conflict, calling for all the patience of conviction, and even the energy of fanaticism. It was inevitable, therefore, that their attention should be concentrated on the invisible Ruler of the world,

rather than on its obvious beauties. The arts, having been polluted in use, might be thought in themselves unholy, and it was left to other and calmer times to appreciate, in all its grandeur, the lesson that human nature is itself a Divine Creation, and that nothing has been created common or unclean.

The principles of the Renaissance in Italy.

The Renaissance was a movement of revolt against asceticism. It asserted freedom, and claimed the full use of its privileges. Artists would not be satisfied always to work within the narrow bounds prescribed by ecclesiastical traditions; they declined to walk any longer with monastic leading-strings. They did not however, seek to break with the old system, but rather to develop it. They would still paint saints and sacred mysteries, but they would do so in their own way. All the resources of art should still be at the disposal of the Church, but they should be governed by Genius, working in a spirit of Freedom, rather than of submission to external authority. There was no trace of Puritanism in the heart of the Italian Renaissance—rather, indeed, the principle was paramount of offering all that was costly and precious in the sanctuary. The love of natural scenery came later, and almost as a consequence. The conviction that it was lawful to indulge the senses reasonably allowed men to see beauty in everything around them, and it was not a pagan instinct which led them to look at snow-clad peaks and smiling valleys as temples of the great unseen Power. Surely it might be felt that this world of ours, with its infinite wealth of all that charms the sense of beauty, has not been so endowed in vain; that we may seek to follow a guidance, felt as well as seen, and regard an imitation of principle as an act of worship.

Its nobler aspects.

It seems to me a great error to class the Renaissance artists with those who appeal only to pride, ostentation, and such unworthy motives. Michelangelo, at any rate, was ever wooing the ideal, living in a world of his own, scorning and eschewing the pomps and luxuries placed freely at his command. Look at the grand old man, in failing health and strength, toiling at his immortal work at the Vatican, and say if he can be accused of displaying in his person, either weakness of devotion or meanness of principle. His intense enthusiasm, and his haughty energy in the worship

of his art, through the wintry days of a long old age, have in them something startling, before which criticism may well shrink back, with a feeling of reverence in the presence of genius.

The different conditions in England.

Turning, however, to England, we have to deal with architecture, temporarily divorced, as regarded ecclesiastical buildings, from painting, and, to a great extent, from sculpture also. The Reformation had broken with the old compromises between art and legend. Our churches had been ransacked, and images and pictures were alike forbidden. The Renaissance in Italy had been a return to the glorification of nature in art. In England, it seemed for a time to wish to drive from us the attractiveness of beauty, and to be content with half-realised suggestions in place of perfect artistic work. If, therefore, we find coldness and formality in the designs of our great architects, Inigo Jones and Wren, it does not follow that the result is due to their failings, or to the deficiencies of the style in which they worked, but rather to the circumstances of their time, and the influences by which they were surrounded.

There is no doubt that Wren at any rate desired to see the interior of St. Paul's present a very different appearance from that which now exists. He knew, probably only too well, how hopeless was the struggle against the ruling dislike of colour and artistic decoration, and he was thus compelled to leave to others a task he must have longed to perform himself. There are many details in the interior, now obnoxious to unfavourable criticism, which might, in all probability, have been very differently arranged by Wren, if he could have felt that the artistic imagination of others was ready to combine with his own in the production of a perfect monument.

Want of popular and public encouragement.

The English architects had not the encouragement which was derived by the Italians from the enthusiasm of their countrymen. They worked, as we have seen, at the bidding of the Court and aristocracy, rather than to satisfy a public and general demand. In Italy, success in the arts was an aim of patriotism. City vied with city in warm artistic jealousy, and we see Venice competing with Florence, and Rome with both, for the possession of Michelangelo. The

great works of the day were chiefly those of public utility, paid for by public money, and devoted to the public use. They were thus essentially democratic achievements; for, although many were carried out nominally by despots, the latter knew that their position could only be maintained by complying with popular demands. These, in each little State, took the shape of requiring that their cities should shine, not only in works of usefulness, but also in treasures of artistic beauty. In England, St. Paul's was an exceptional case, and the cost of it was paid by taxation; but in most instances we can only investigate the Renaissance amongst ourselves, in examples of palaces, and the private mansions of the nobility. The English assertion of individual freedom, passionate in its intensity, has too often seemed to obscure the duty of public co-operation, and the richest nation of the world is thus always found too poor for any comprehensive encouragement of art.

Similar conditions exaggerated in modern times.

Millions upon millions are readily forthcoming for warlike charges, while the arts of peace are neglected, and even the great national buildings, which are absolutely necessary for public business, are starved of artistic completeness, and shorn of essential architectural features, at the bidding of a miserable self-called economy. At the same time, and in the same breath, we architects are taunted with our inability to make bricks without straw; and it has even been declared to be an object of public policy to cease to employ the trained and practised architect in the service of the State, and to hand over our public buildings to the unknown and practically irresponsible clerks of a 'Department.'

The late Professor of Architecture in this place, Sir Gilbert Scott, recently complained at the Institute of Architects that he had heard that 'Government was thinking of renouncing the employment of architects, and of substituting officials and clerks in their place; if this were true, it would show that our governors were incapable of appreciating the services rendered by architects to the country.' If this proposal is to be adopted generally, as it has been partially, we may point out that it is impossible to imagine a course of action more calculated to discourage genius, or the rising talent of a great profession; and the

question may be well asked, Is it fair to the public? Have they not a claim to the very best which any profession can supply?

It is possible, of course, that the bureaux of our Government Offices may be, for the moment, the places in which to look for unknown Wrens and Michelangelos, hiding their light under a bushel, and bending their necks beneath a clerkly yoke. Such cases, however, must be exceptional. Our departments may for a time be specially fortunate; but in the end the inevitable result must be a reign over our public works of a system of tame, if safe, mediocrity, under a *régime* of clerks, recruited, ultimately it may be, from the ranks of 'those who have retired from business, or from whom business has retired.' Will such a result be just to the public, or encouraging to art?

Lessons of Italian art, history, and Renaissance.

If the art-history of Italy can teach us nothing else, it can at least show us a time when men cared about art, when prince and people united to honour the artist, and when great cities turned out their thousands to walk in procession after a work of genius, or to follow a great painter to the grave. The Renaissance also can indicate to us a path by which an advance may be made, even if we are unable to accept its principles unreservedly. It was a time of energy, an age of determination to carry out not only artistic decoration, but also the necessary public works of utility, demanded by the large populations which were beginning to gather in the fair cities of Italy. It was the great ambition of artists of the time to improve and adorn their native places.

Primary need of radical and sanitary changes.

In this nineteenth century the state of our huge towns is too often an opprobrium not only to the architect, but to our public policy. I have on other occasions spoken to you about the houses of the poor, and the urgent need that exists for their improvement. Before we can even begin to hope for art-progress, the first necessity is that the people should be supplied with pure air and pure water. The old Roman aqueducts have excited the admiration of ages, and the Renaissance architects had their examples to follow; while Leonardo da Vinci did not think it inconsistent with with the claims of art to busy himself with the irrigation works of hydraulic engineering.

It is only of late that a tardy recognition of the importance of such matters has arisen amongst ourselves. Something has been recently done by legislation to improve the dwellings of the working classes; and, in reference to water supply, all must have noticed with satisfaction that no less a personage than the Prince of Wales has lately addressed the Society of Arts on the deficiencies, in this respect, of our great towns, and has requested the Society to bring about a discussion and consideration of this important subject.

We have lately heard much of schemes for bringing water to the manufacturing districts from quiet mountain lakes; and anxiety has naturally been aroused, lest such attempts should rob the latter of their tranquil charms. Man, however, is more than scenery, and for his needs water must be had. The ancient aqueducts already referred to had merits of their own, and did not necessarily injure the landscape. Let us hope, therefore, that some way may be found to reconcile opposing views, so as to provide a necessity of life for millions, without injurious interference with the sylvan beauty of lake or valley.

Subsequent need of regeneration of taste.

We may be sure that every artist, whether architect, painter, or sculptor, is interested in the cleansing and amelioration of the homes of the masses. Without such primary improvement, it is idle to talk of interesting them in art, or to dream of a regeneration of the national taste. This may come later. In the meantime, architects should encourage, by every means in their power, all well-planned efforts to bring 'sweetness and light' to the dens and alleys of our densely populated cities. When such good works have been done, we may hope for better things, while, for the present, we may at least decline to accept the conclusion that there is nothing for us to do, but to sink in languid dismay into a hopeless Slough of Despond. We may surely ask, after the experience of both Mediæval and Renaissance days, whether our own nineteenth century can do nothing for art. Is it indeed too late to cleanse, improve, and adorn our grimy hives of industry—to bring culture and beauty to the homes of our vast population? May not our people, at least, be enabled to wash and be clean—clean from the debasing associations of squalor and hideousness—

clean from the stains of selfishness and greed; and thus become ready to combine to carry out those public improvements which exalt a nation, while they dignify society, and glorify art?

Unlimited future possibilities.

If Englishmen were really in earnest, what limit need be placed to their achievements in science or in art? Science, indeed, takes care of itself. It even seems to some of us to tend to thrust out art from its proper place in the affairs of men. This danger, however, can only become formidable, when art fails in sympathy with the aspirations of its age. Architecture in any case cannot take such a position, for her claim is to assimilate science, as well as to nourish art. The old buildings which surround us are scientific, as well as artistic; and the cathedral of our forefathers is often a truer example of science, than the hideous railway sheds, which we know too well. The difference between the two cases is, that the one was governed by the resolution to do the best that was possible; the other by the obligation to obtain the quickest and the cheapest result. The one was the chosen task of a community, obeying its recognised leaders, and working cheerfully, with high and disinterested aims; the other is the speculation of private persons, toiling painfully, with a natural selfishness, in the pursuit of gain.

Conditions of a true 'Renaissance' in our own times.

All artistic progress in the future must be sought by enlisting public sympathies; the schoolmaster must show himself abroad, in art as well as literature; and artists must know how to educate their critics. Modern legislation is all in the direction of free local government; wealth abounds throughout the land; and there is therefore no reason why our towns should not vie with each other, as did the Italian cities of old, in works of art, as well as in those of utility.

Then may we hope for a public feeling for culture, refinement, and for art, which may perhaps entitle some future chronicler to speak of the Victorian era as of another and a better Renaissance, not of architecture alone—a Renaissance of all that purifies and gladdens the mind of man, and leads his thoughts to those higher and diviner aspirations, which even an infinite future may seem too small to satisfy.

LECTURE IX.[1]

ITALIAN GOTHIC, THE PRECURSOR OF THE RENAISSANCE.

The periods of Italian architecture.

In this, and the four following lectures, I propose to consider the Renaissance in Italy, and, as a prelude to so doing, shall speak to-night of Italian Gothic as the precursor of the Renaissance. The next discourse will also deal with Italian Gothic as employed for secular architecture. Passing onwards, the Early Renaissance, associated with the great name of Brunelleschi, will claim our attention in the third lecture. The fourth will describe some of the works of the second period of the Classic Revival, and particularly those of Bramante and Sansovino; while in the last lecture of the present series I shall hope to sum up to a certain extent the history of the Renaissance movement as a whole, with some reference to its present, and probable future, influence on modern architecture. In so doing, the last stage of the Revival in Italy will come before us, associated with the names of Palladio and Vignola.

In a previous lecture I have already entered into some general considerations of the effect of the Renaissance on English architecture, first on our Transitional styles, and afterwards on the Classic revival of the restored Stuart *régime*.

We may now follow up the subject more in detail, and devote our attention, in the first place, to the early manifestations of the Renaissance spirit, which I have called the Transitional.

It has been said of the Renaissance that it is the movement which has brought us from true principles to

[1] Delivered February 6, 1879.

false, from the architectural glories of Gothic Venetian palaces, to the bathos of Harley Street and Bloomsbury. This seems, however, a partial and unfair account of the position. The deadness to artistic feeling in our architecture, which has given us our cheerless streets of the Georgian era, was due to the indifference to all schools, and not to the influence of one of them. Our case, moreover, was peculiar; and if we turn our eyes for a moment to our nearest neighbours, the French, we shall see that, although France has adopted the Renaissance more heartily than ourselves, she has never been contented with such a transfer of architect's mission to the bricklayer and the carpenter, as we have seen here, until very recent times. I do not wish to extol the precise methods adopted by the French, or the detailed forms chosen by them; but if we are to refer to the modern work, as illustrating the effects of the Renaissance movement, it is at least as reasonable to study the always striking, and often graceful work of French architects (previous to the Haussmann epoch), as the dingy brick walls with square holes in them, within which our grandfathers were contented to dwell, at the pleasure of the speculative builder, who, placing his work on another man's land, not unnaturally thought more of a speedy profit than of architectural excellence.

False charges against the Renaissance movement.

At the time of the first signs of the Renaissance in Italy, Gothic was beginning to exhibit symptoms of decadence, both in general forms and in detail. To some, the first signs of novelty appear, indeed, only as corruptions of the style till now supreme. Vigour of thought was replaced by refinement of execution, and architectural ornament had become uninteresting. The Italians had always worked on somewhat different principles from the architects of sterner climes. Southern Gothic had thus a character of its own, and was ready to lend itself to fascinations of detail. Living upon classical soil, and among the dry bones of old Classic art, the Italians were in the most favourable position possible for welcoming a change, which to them seemed but a natural return to ancient traditions. They were also far from contented with the state of affairs then existing in their midst. The new ideas brought with them something of rebellion,

Italian Gothic in its later stages.

and constituted a protest against the austerity and dogmatic intolerance of Mediævalism.

Its peculiarities in contrast with Northern.

Before proceeding with our examination of the Renaissance, it may be interesting to observe some of the peculiarities of the Italian Gothic architecture; and we may then perhaps appreciate more readily the difference between the mild resistance to the introduction of Classic forms, which might be expected from it, and the more uncompromising opposition of the architecture of northern Europe.

We shall find in its examples a spirit of horizontalism, which opposes itself to the all-pervading verticality of our own Mediæval architecture. In the larger diameter of shafts, and in their frequent use as single supports, reminiscences of the columns of Greece or Rome readily suggest themselves. The pointed arch, moreover, had not only to admit a rival, but even seemed unable to hold its own. The Italians loved the round arch, while they only tolerated the pointed form. Ignoring buttresses, they tied their arches together with iron rods, and seemed to be incapable of those daring feats of construction so familiar to the Gothic architects elsewhere. Repose and breadth of effect had more charms for the Italian mind than the bold projections, the deep shadows, the mysterious intricacy, and the complicated details, of the northern work. They had broken, indeed, with the simple lintel construction of Greece; but the arches of Rome were less easily forgotten, and their employment less readily renounced. The graceful campanile of Giotto at Florence illustrates these peculiarities of Italian Gothic principles of design. They will be the more readily understood, if you observe the contrast it presents to the towers and spires with which we are familiar in England—as, for example, the towers of Lincoln and the spire at Salisbury. In connection with Giotto's beautiful work, let us examine for a few moments the great cathedral to which it serves at once as a foil and an appendage.

The Duomo at Florence.

The great church of Ste. Maria dei Fiori, the Duomo of Florence, stands forth as a giant, disdaining ornament or smallness of detail. Its features are few, simple, and almost colossal in scale. The elaborate details of Giotto's tower,

with the numerous parts of small dimensions, and the high finish, both of the design and its execution, bring out the hugeness of the Duomo by the force of contrast, while the tower in its turn gains somewhat in exchange.

The work of Arnolfo di Lapo.

The great church illustrates, first, the plainness and simplicity of plan on which I have before remarked. It was commenced by Arnolfo di Lapo, just before his death, which occurred about the year 1300, and we do not know for certain how far he had been enabled to carry his ideas into execution. He is usually credited with the general conception, the arrangement of the plan, and the construction or design of the vaulting, always excepting the dome, which was added long afterwards by Brunelleschi.

Arnolfo's design for covering the space now crowned by the dome is involved in mystery; but it is supposed that he intended to raise his roof immediately over the piers and above the first cornice, so that the line of springing should coincide with that of the nave vaulting. He was an architect of great reputation, and was largely employed by the Florentines, some of his works still remaining as embellishments of the fair city. He united, as did most architects in those times, the practice of military engineering to that of his own art, and some portion of the outer defences of Florence were constructed by him. He designed the great municipal Palazzo dei Signori, as well as the loggia of Or' San Michele, the church of Santa Croce, and other buildings of less importance. In the Duomo he has bequeathed to us the latest church constructed in Italy during the Middle Ages, and we may study with advantage this illustration of Italian Gothic on a grand scale.

Contrast with Westminster Abbey.

If you desire to observe how sharply the design contrasts with Mediæval work in Northern Europe, you may place side by side with the plan of Arnolfo's Duomo the plan of Westminster Abbey.

The plan.

In the nave of the former, 250 feet long, there are but four arches; in the latter example we find twelve arches in a length of 233 feet. Each church is divided transversely into nave and aisles, but these three divisions occupy a space of 125 feet in the one case and only 75 feet in the English example. The upper end of both churches expands, as is

usual. At Florence, we find a grand central space surmounted by a pointed dome, with three tribunes, all alike covered with semi-domes. At Westminster there is a multiplicity and intricacy of parts, none of them presenting exactly the same effect, because planned with various angles, and much diversity of dimensions and detail. I exclude from this description all consideration of the chapel of King Henry VII., as being a later addition, not affecting the general plan of the Abbey.

The triapsidal arrangement.

The Italians evidently admired the triapsidal arrangement designed by Arnolfo, for we know that it was afterwards adopted for St. Peter's at Rome. The preference for a semicircular form as the termination of the three arms of the cross, may have been caused by reminiscences of the old basilicas. It is found in the Church of the Nativity at Bethlehem, and was not uncommon in the early German churches. A remarkable example of this arrangement exists at Trèves, and visitors to Cologne may remember other cases, such as the Church of St. Maria in Capitolio, the Apostles' Church, and the Church of St. Martin. Those buildings illustrate the basilican arrangement of plan, which Arnolfo adopted at Florence; and apart from all questions of style, they seem to deserve the attentive study of architects who are called upon to provide interiors capable of accommodating large numbers of persons. At Westminster, and in the churches of the Middle Ages generally, large free spaces were not felt to be required. The service was, for the lay worshipper, to be contemplated in faith rather than claimed for actual participation. Long naves and aisles were needed for processions, and large choirs for the clergy. The modern English architect has other problems to solve, and may well find in some of the simpler basilican plans models deserving his careful attention.

The simplicity of detail

At Florence, the scale is too colossal to please, and has the character of a small design unduly magnified. On entering the nave, the great arches, although well and gracefully proportioned, have a bare and unsatisfactory effect, and on passing from the nave to the central area, under the dome, this feeling is intensified. The nave should be the entrance to something grander than itself, and so

PLANS OF THE
CATHEDRAL AT FLORENCE,
AND
WESTMINSTER ABBEY.

From
Fergusson's 'History of Architecture.'

Page 351.

indeed it is, as far as mere dimensions are concerned, for the dome is 137 feet in diameter, and about 280 feet high. These grand dimensions are, however, to a great extent thrown away, by reason of the want of detailed parts of moderate size, to serve as a scale for the whole. Mr. Ferguson compares the Cathedral at Florence to that of Cologne, to the disadvantage of the former as regards the effect of apparent size. The two churches cover areas not unlike, 84,802 square feet being that of the Duomo, while the German building occupies a space of about 91,000 feet.

Contrast of Italian and Northern groining.

The nave of Arnolfo is groined in a simple manner, very different from the more elaborate arrangements favoured by English architects. Like so many other parts of Italian Gothic building, the vaulting seems incomplete without painting. The designers of these structures appear in many cases to have regarded them rather as a framework, to be filled in by others, than as works of architecture, complete in themselves. Painting, sculpture, exquisite marble work, terra-cotta, enamels, bronze, and mosaics, were all expected to form a part of the completed design, and the architecture proper was confined within such limits as would afford due scope for these associated arts. Simple forms, spaciousness, and great wall-spaces are consequently found associated with Gothic architecture in Italy. England had less wealth of art in general, but more skill and self-reliance among her architects. They could not count on the assistance of accessories, and relied more on themselves. In vaulting their churches they had no superiors. Being content with moderate dimensions (as at Westminster, where the nave is less than 36 feet wide), and being at the same time masters of construction, they delighted in forms of roofing which became more and more elaborated, until they culminated in the method known as fan-groining, to be seen in Henry VII.'s Chapel at Westminster, and other Tudor buildings.

The Italians were well aware of the customs of the Romans. They knew that they had employed domical and barrel-vaulted roofs. The remains of the great baths which had been covered in this manner were before their eyes. It was natural, therefore, for them to adopt large dimensions

with the simple vaultings of the dome and its kindred forms. For decoration they relied on the painter, in marked contrast with their Northern brethren, who, revelling in clustered shafts, large traceries, elaborate arcades, and deeply cut mouldings, left but little to be added to their work, which was penetrated by a predominant and all-pervading architectural idea.

Buttresses and ties.

The Northern architects, in their power of construction, were the engineers of their day, as well as artists in design. Employing buttresses, of whatever form might be best constructionally, they were always advancing in the science of building, and their work has never been surpassed in this respect, although the use of faulty materials, and the neglect occasionally to secure stable foundations, have imposed on their successors the necessity for extensive works of reparation. The Italians shunned buttresses. We look for them in vain, in Arnolfo's church, or in Giotto's tower. At the Duomo, around the upper arms of the cross, strength is obtained, less scientifically, by an enormous thickness of wall. Elsewhere, resort was had, without reluctance, to iron ties to keep the arches from thrusting out the walls.

Wall surfaces.

With their love for repose, and breadth of effect (both of them most admirable qualities in themselves, when rightly understood and employed), the Gothic architects of Italy preferred a plain wall, as at Florence, to the varied surface, familiar to ourselves, at Westminster and elsewhere, with its variety of light and shade, and its picturesqueness of outline both of plan and elevation. They did not, indeed, wish their walls to be undecorated. They were ready to cover them with marbles, arranged in panels, and to crown them with cornices of great elaboration. Here we may see evidence of that reliance on others to which reference has just now been made. Such veneering with marble as exists at the Florentine cathedral has nothing to do with the architecture. It indicates no construction, and might have been applied by any one, and at any time. It serves to give some scale to the building, and to this extent is valuable; but it appears rather as an independent attempt at decoration than as an architectural design successfully achieved. There is a weakness in these veneering efforts at ornamention, which

brings into strong relief the more manly, self-sufficient vigour of the purer Gothic styles, in other countries.

Classicalism of Italian Gothic.

Italian Gothic must, indeed, be rather regarded as an incomplete style, not fully worked out, than as a perfect system, able to compete on equal terms with Mediæval work abroad. Whether we regard the general principles of composition, or the detailed forms adopted in Italy, we come everywhere upon traces of Classicalism, which seem to herald the Renaissance. A few slight changes in the Duomo at Florence, with the substitution of a barrel-vault for the groined roof over the nave, would give us a building that might compare with the old Roman work, such as the Baths of Caracalla, or the Temple of Peace.

Exemplified in details.

If we turn from general principles to the consideration of special details, we shall find in them also remains of Classic custom. Instead of the clustered shaft, so beautiful and varied in its design, as we see it in our great churches, we have, as I have already said, the single column, recalling the style of Greece and Rome. The use of the single shafts is common in Italy, not only in arcades, but as mullions for windows, and in such cases they are often doubled on plan, with a happy effect. The abacus is almost always square, as is the lowest member of the base—facts strongly suggestive of a Classic origin. The same may be said of a diminution in diameter from the base to the capital, which is occasionally found in Italian Gothic columns. In English Gothic, such diminution is almost unknown, excepting some instances of Norman work, due doubtless to a Romanesque influence. In other details of Italian Gothic, we may see further signs of attempted fusion, as in the plain archivolts, with square edges, where all English or French architects would have had a cluster of mouldings, with round beads and alternate hollows, coming down upon a circular capital. The cornices, again, forming strong horizontal lines round the building, are evidently derived from the older architecture.

The square abacus and base, borrowed from Classical architecture.

The abacus of the column has a direct relation to the archivolt which it supports. A Roman archivolt, with its outside moulding, and the square edge inside, required a square capital beneath it on which to rest. The octagonal

capital is not unknown in Italy, but it is rare, while the square form is the all but universal rule.

The Greek method of covering the spaces between the columns by a massive lintel of rectangular section, required a square surface on which to rest, and consequently, although the columns were circular on plan, the upper member of the capital was either square, or of a form allied to the square. In the Grecian Doric, the moulded part of the capital was circular, while the uppermost member only was square on plan. The Ionic had also originally a square abacus, and the Corinthian order alone adopted a curved form. The latter, indeed, was little different from a square, having the sides slightly curved, with a give and take line. In all these cases, the square abacus formed a sort of cushion, or template, on which to rest the beam of stone or lintel, the support of which was the *raison d'être* of the columns.

This square abacus, adopted from Classic times, has never disappeared from Italy, and is constantly used in Italian Gothic. We find it here also, as you are aware, in the Early Gothic, which was more or less drawn from Romanesque and Byzantine types. In the best ages of English Mediæval work, however, the circular form was almost exclusively used, until, in the latest styles, the abacus became octagonal, as you may see in many Perpendicular examples. By this time the abacus had lost its distinctive character, and had become mixed up with the rest of the mouldings, which sometimes also followed the octagonal type—the more common design, however, being a mixture of mouldings, circular on plan, with an octagonal abacus, the transition from one form to the other being skilfully managed by the interposition of a large hollow.

The Italian Gothic architects, building as they did in an arched style, had not exactly the same reason as the Greeks for providing a square surface on the upper part of the capitals, but they needed such an arrangement almost as much from the section of their arches. These were for the most part plain, or very simply moulded, with a considerable thickness of square reveal or soffite. The section of such arches at the point of springing, immediately over the capital, was square, and thus a square abacus was the most

convenient, and the best constructional form. In the classical column, the abacus was a plate, or bearing surface, interposed between the weight above and the supporting column below, the diameter of which was equal, or nearly equal, to the width of the stone lintel or beam, which it carried. The Byzantine and Gothic capital was differently treated, and acted as a direct transmitter of strain to the column, which was much less in diameter than the superincumbent weight. The column had thus lost importance of dimension; but such loss was compensated by the practice of placing one column behind another in arcades. In such cases a common abacus often united the two capitals, as may be seen in the cloister arcades of San Zenone, Verona, where, moreover, the wall above the columns is further thickened out by means of corbels. The bases of these columns are united, as well as the capitals, and like them they have also a square, or rather rectangular member. The base mouldings are an evident reproduction of the Attic base, with all its members and peculiarities. The lower plinth, square or rectangular on plan, served the same purpose as the abacus of the capital, as a transmitter and distributor of pressure.

The arch mouldings. The arch mouldings were, as we have seen, such as seemed to be specially suitable to a square abacus. When the arch was not actually square in section, a few indentations, with the occasional interposition of large beads, filled the place of the smaller beads, fillets, chamfers, and hollows of English Gothic. In their fondness of plain surfaces, and dislike to bold projections, the Italian architects may be said to have designed their buildings as elevations, while our own Mediæval architects thought theirs out in perspective. Much of the difference may be due to climate, as under an Italian sun the deep shadows of Northern Gothic might have seemed exaggerated.

The wall decoration. The same influence told doubtless on the wall decoration, which was noticed above as applied to the Duomo at Florence. Deeply moulded arches were obviously unsuited for marble, a material in which the Italian architects were permitted to rejoice. The real construction was often veiled, and the forms of the mouldings dictated by the necessity of upholding thin

veneers of costly marble, forming a system of decoration applied superficially to the actual structure. In spite of all care to the contrary, it is impossible to prevent these slabs of encrusted marble from cracking or bulging, as unforeseen pressure comes upon them, by the settling of the building or otherwise; and when this is the case, all sense of permanent security vanishes, and with it all enjoyment. The introduction of marble in panels, recesses, or spandrels, is not liable to this objection; but when such decoration is used externally, it will be generally found that the English manner of preferring ornament of a more solid charcter, such as carving can give us, is likely to produce a superior effect. The panelling on the outside of the cathedral at Florence recalls the work of the cabinet-maker, rather than that of the architect.

The Cathedral at Siena—the exterior and interior.

The building is, however, incomplete, and if the entrance-front had been finished, as designed by the architect, the whole effect of the exterior would no doubt have been more pleasing. We do not indeed know how Arnolfo would have treated his façade, but in Siena Cathedral an example exists, very rare in Italy, of a front entirely finished. In this case, we have an elevation of great richness and much beauty of detail. It is, however, an application to the building of veneer on a large scale, for the outline bears but an imperfect reference to the constructional form of the building within. Gables appear for ornament, without roofs behind them, and the aims of the designer would seem to have been akin to that of the scenic artist, who presents us with a frontispiece, and does not allow us to turn the corner, or view it, save from one point. The interior of Siena Cathedral is certainly one of the most charming of Gothic churches, not indeed so much for its architecture, strictly so called, as for the exceeding beauty of detail of the accessories thereto. The strongly marked banding of various coloured marbles in its walls is, indeed, monotonous, and to my thinking inharmonious with the vertical principles of Pointed Architecture, but the whole interior glows with gorgeous colour. We have exquisite carvings, as in the pulpit, elaborately inlaid woodwork, paving of splendid design and execution, bronze and iron-work, gilding, and coloured marbles in profusion. The architect has provided an arena within which art of every

CATHEDRAL AT SIENA.—Façade.
From Fergusson's 'History of Architecture.'

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kind has seemed to revel. The details are everything, and the general architectural idea is smothered by the accessories which should have been its servants. It was probably of such a building that the Florentines were thinking, when they instructed Arnolfo to build for them a cathedral, which should exceed in beauty all previously existing structures, and should exhibit a 'style of magnificence which neither the industry nor the power of man can surpass.' Arnolfo did not live to carry out this grand commission; and it is strange that we are left so much in the dark as to his ultimate intentions, if (as Vasari tells us) he had a wooden model prepared of his completed design, which model was afterwards lost through the carelessness of his successors.

The windows.

In further comparing Italian with Northern Gothic, we cannot but notice the difference in the windows, as regards not only their relative frequency and size but also their architectural character. In the great Northern churches the architects delighted in large and elaborate windows. In Italy they were few and far between. The brightness of the sunny South taught its builders to exclude light and glare, and the use of coloured glass was not encouraged. It may be doubted, indeed, if such use would have been consistent with the methods of internal decoration, common in Italy. Great spaces of wall, covered with fresco painting, might not unreasonably be thought inimical to the adoption of painted glass, through which a bright light would cast hues of undisguised variety on the carefully studied harmonies of the painter. In England, and still more in France, the introduction of stained glass affected the design of churches to an enormous extent. If we had not the wall polychromy of the Italians, our architects were no less fond of colour, and they found in large traceried windows generally, and often exaggerated clearstories in particular, a field for the application of colour on a large scale. That with which the Italians covered their walls, their Northern contemporaries placed in their windows.

The tracery.

The same feeling appears in the tracery. In Italian churches, there is generally little of it to be seen, and, where it exists, it is far inferior to that to which we are accustomed in this country. The tracery of Italy, with its heavy

intervals between the openings, seems designed, as no doubt it often was, to exclude light, and thus the very reason for the existence of the window is lost. The lack of an adequate clearstory, partly from reasons of climate, and partly from the views adopted by Italian architects, is to a Northern eye a notable defect in their churches. The pleasing gradation of height, from aisle to nave, to which we are accustomed, is absent, and in its place there is heaviness and want of variety.

Caution as to introduction of Italian details into English Gothic.

Of late years, so much attention has been given to Italian Gothic architecture, that many of our architects have adopted details taken from it into their own designs, which had been previously based upon the purer styles familiar to them in their own country. In this way, a cosmopolitan character has been impressed upon certain works; and although there are those who condemn such a process on principle, I cannot see any reason for such condemnation, apart from the special merits and demerits of each case. We are entitled to regard our art as a whole, and its history lies open before us. If we are of opinion that certain forms with which our ancestors were unacquainted, but which are known to us, are good in themselves, there can be no valid reason why we should refuse to avail ourselves of them in our work of to-day. Students must bear in mind, however, that to do this well and reasonably is a matter of no small difficulty. They must not expect to avoid the reproach of incongruity by pointing to their sketch-books, and giving the name and date of every detail. The essential quality of all true art is its fitness, and in adopting Southern detail into Northern work, the presumption is against the process. We should, therefore, be very sure that in attempting fusion we are not sacrificing principles, or offending common-sense. With this proviso, the lessons of Italian Gothic are before us, and may, in certain cases, be followed with advantage.

In illustration of my meaning I may perhaps recall to your memory the description of the Italian capital, with its square abacus. This form is appropriate when used, as it was in Italy, to support arches with flat soffites, or with simple mouldings, not much differing from a square or section. It is quite otherwise, however when the Italian

capital is used beneath a group of deeply cut English mouldings, bringing the soffite of the arch to a more or less narrow fillet. In such cases, the square abacus ceases to be reasonable, and according to the law of common-sense in architecture, it fails to please. The corners of the capital appear isolated, overhanging, and heavy, and we miss the simple gracefulness of the English jamb or mullion, with the mouldings naturally continued, or varied by the use of an attached shaft, of dimensions not greatly in excess of the mouldings, of which it seems to be a part.

The use of Italian Gothic for brick architecture.

One inducement to adopt the architectural details of North Italy has arisen in consequence of our habitual employment of brickwork. In this country, from the difficulty in many parts of procuring stone, and from the increased cost of building, the necessity for economy meets the modern architect at every turn, and imposes upon him limits which he cannot disregard. Large churches are often necessary, where poverty renders it impossible to employ costly stonework for construction. Brick has therefore of necessity become the common building material, and a style of architecture, which seems to lend itself readily to the use of brickwork, has obvious claims on our attention. In the plain jambs, the simple mouldings, the geometrically enriched cornices, and string-courses of North Italy, we have features which are specially appropriate to brick architecture, while by the employment of the column, the use of numerous small pieces in the mullions of the windows is avoided, a defect which appears very clearly in the brick Gothic architecture of Northern Europe. The adoption of terra-cotta, again, has proved an argument in favour of Italian types. You are aware how splendidly the use of this material is exemplified in such Italian buildings as the great hospital at Milan. In England, apart from a few exceptional instances, terra-cotta has held an inferior place; but there can be no doubt that it offers great opportunities to the architect of taste and judgment. I have in a former lecture [2] attempted to point out to you the limits within which, as it seems to me, terra-cotta can be properly applied, and these may be broadly defined as ornamental, rather than

[2] See Lecture VI. (Second Series).

constructional, for which latter purpose stone, and in default of stone, brick, must be considered the preferable material.

The legitimate uses of plaster.

In using brick for buildings, in our large towns, we must always bear in mind the changes of our climate, and the consequent dinginess which sooner or later settles on brickwork, and obliterates distinctions of colour. We are often very hard on our immediate predecessors who covered their brickwork with stucco, but we may remember that their buildings, at any rate, admit of being cleaned, so as to afford some cheerfulness to our streets. Architects may perhaps consider whether they have not been too indiscriminate in their denunciations of plaster. For interiors, at any rate, it has many advantages, and is often to be preferred to the rude brickwork, not too good, either in quality or workmanship, which we are asked to accept in exchange. No one would desire to use cement dressings and cornices if he could do better, but for coating plain walls plaster will act as a protecting covering, giving both warmth and dryness. There should be some place in our work for methods of building which possess these advantages, and the question arises when and how plaster may be legitimately used. It would not appear that the Italian Gothic architects had much affection for brick surfaces in themselves, being always ready, as we have seen, to cover their walls with veneers of marble, according to the means at their disposal. This was of course an application of a covering more foreign to the structure of the walls so treated, than cement or plaster. The truth is, it is impossible to lay down absolute rules in such matters. Architecture should satisfy the reason, and should please the taste; and all the precedents in the world will not make a man like that which his soul abhors.

Conclusion.

The charms of Italian Gothic art have perhaps led some of us to stray too readily from English traditions. Great caution will always be needed in adopting foreign customs, and we must be sure that in so doing we are borrowing from the rich to lend to the poor. Can this be said of Italian Gothic, when we think of the wealth of resources of all kinds in our English architecture? The great architect who has lately passed away from us (Sir G. G. Scott) was slow to answer

this question in the affirmative, and his example enforces the lesson of caution I have ventured to suggest. In the meantime, rejoice in the opportunities you enjoy of investigation of the work of your predecessors in every land, opportunities which, until lately, were beyond the reach of all but a few of Fortune's favourites; but, while you are studying the art of other times and nations, do not forget the dictates of common-sense, or the needs of your own age and country.

LECTURE X.[1]

ITALIAN GOTHIC IN SECULAR BUILDINGS.

In my last lecture we examined some of the principles which actuated the architectural designers of Italy in dealing with the style commonly termed by us Italian Gothic. In the churches of the day, the architecture occupied a position subordinate to those of the sister arts, and failed to produce the effect of unity and grandeur to which we are accustomed in the more scientific and purely architectural work of the northern school of Gothic architects. The Italians seemed, indeed, somewhat half-hearted about their ecclesiastical architecture altogether; for it is rare to find a church of this time completed from the original design, and we left, as you may remember, the great Cathedral of Florence, with its unfinished arcades of Arnolfo, waiting for its completion, in another style, and by other hands.

Italian Gothic in application to secular buildings.

We may now turn our attention to another part of the subject, by inquiring how the pointed architecture of Italy was applied to buildings other than churches. The state of civilisation to which Italy had attained, during the thirteenth and fourteenth centuries, is well illustrated by the splendid palaces erected for civic purposes, and for private residences. Such are the town-halls of various cities, and the palaces of Venice. The first class illustratethe municipal, and the second the oligarchical principle. In the great cities, the public service was already, in great measure, controlled by popular power, and republics became the nursing mothers of art.

Patronage of art by Democracies in Italy.

Surprise has occasionally been expressed at this result, but it will, I think, be dissipated by reflection. It is natural that Democratic communities, ruling by and for the people, should witness with satisfaction the employment of public

[1] Delivered February 13, 1879.

funds for purposes which aim at giving pleasure to the greatest number. Architecture, regarded in this manner, should be the most popular of the arts. A great building, for a public purpose, cannot be hidden. It is national property, and under proper regulations the humblest citizen has a right to its enjoyment. While whole treasuries of artistic wealth may lie concealed in private galleries of painting and sculpture, an architectural monument, such as St. Paul's or Westminster Abbey, is open to all, and our public buildings may well constitute in themselves a 'National Gallery' of Art.

Italy, becoming rich, and with local influences intensifying themselves into a strong and even narrow local patriotism, valued art, and employed it amongst its other resources. By its aid each city was proud to hold its own, and when possible to claim superiority as regarded others. The great civic works were constructed, in the main, by Republican power, or by those who, like some despots of later days, have been contented to be tyrants by the will of the people.

Want of corresponding effects in England.

The Democratic spirit in Italy was thus favourable to the cultivation of art, and it may appear strange that this has hardly been the case hitherto among ourselves.

In this country, the change towards Democracy has been none the less great, because gradual; and it becomes an interesting question whether the growth of those influences, which were favourable to art in Italy, has had a similar effect in our own country.

The answer must, I think, be in the negative. Not that any opposite result has been aimed at; but that it has hitherto proved impossible to excite an interest of Englishmen in art sufficient to make them desirous of erecting great architectural monuments. The artistic taste of the Italians was innate, and answered readily to external suggestions. With us it has been more a matter of individual education and culture in the case of the few, while it has been neglected as an element of national prosperity. It has not been so elsewhere. Art has been cultivated by our neighbours, the French, not only from inborn taste, but also from calculated policy. We are now complaining of foreign rivalry of trade.

and calling out for technical education. Perhaps it may at length dawn upon some of our rulers that an educated national taste may even be a matter of commercial importance.[2]

Tendency to stint public buildings.

When a public feeling for art is weak, the wealth of a nation is diverted rather to selfish gratification, than to the public gain. Thus, at the late Paris Exhibition, we were told that our foreign friends were amazed at the number and costliness of the works of architecture in the English Department, which represented private expenditure for individual enjoyment.

It has become a commonplace among ourselves that our public buildings are to be stinted, and those which are now in progress are no exception to the rule. It is indeed becoming the practice of the State to exclude architects altogether from any but the very largest public works, and a doubtful economy is more esteemed than architectural excellence.

Exemplified even in the Houses of Parliament.

The most important civic edifice erected in our own time has undoubtedly been the Houses of Parliament. This was a work extending over some twenty years, requiring the best part of the life and energies of its architect. I will not now speak of its architectural merits, nor am I about to discuss the views of those who, on the one hand, declare it to be the most successful result of the Gothic revival, or the judgment of others, who hold a diametrically contrary opinion.

[2] I cannot forbear from quoting here, from an article which appeared not long since in the *Pall Mall Gazette*, from its correspondent in Paris, with whom I leave the responsibility of his statement of facts, and his expressed opinions. He writes: 'What a surprise it would be to Pitt, whose scorn for art has been so eloquently described by Macaulay, could he have read the report of M. Antonin Proust, on the "Budget des Beaux Arts." Pitt refused to grant public money to men of letters, or artists; the French Government has always pursued a different policy, and a policy which has proved remunerative.'

Then follows a list of the chief items of a total vote of about 220,000*l.*, for purposes connected with art. Among them we find 60,000*l.* for preserving national monuments, 30,000*l.* for works of art to decorate public edifices, 6,000*l.* for the French Academy at Rome, and 12,000*l.* for the National School of Fine Arts, which includes among its members 574 architects.

'France,' he continues, 'spends thus annually some 220,000*l.* on matters connected with art. The results of this expenditure were visible at the recent Exhibition; they are visible here every day, no matter to which side you turn.'

I wish to refer to it only as one of our greatest public monuments. It is a building which provides for the highest business of the country. The monarch addresses from the throne the Houses of Lords and Commons, and through them the listening world. The so-called private business of the country, business affecting the comfort of the nation, and the expenditure of millions upon millions, is transacted within its committee-rooms. Some of the highest officers of the Commonwealth reside in it. Taking the building as a whole, there is no spot in the empire of equal interest. In this case, if in no other, we might have thought that considerations of expenditure might well have been made subservient to efficiency and to artistic considerations; and yet people are for ever talking of the cost of the Houses of Parliament, rather than of their artistic merits or defects.

On the question of expense, the common assertion is that it cost two millions. Two millions, expended in twenty years—a hundred thousand a year out of an annual expenditure of eighty millions, for housing the Legislature of a great empire—about the same sum which our neighbours the French have spent, with a *cœur léger*, in as many months, on the evanescent splendours of a Great Exhibition, to say nothing of an almost equal outlay on their new Opera-house. Two millions—a third part of the sum expended in preparation, at the first whisper of war—a fraction of the cost of a single ironclad squadron. In truth, the building of the Houses of Parliament, *as designed by the architect*, did not cost two millions; although the assertion has been so often made that, by repeated iteration, it has come to be accepted as correct. But be it less or more, the great question with respect to such a national monument should, as it seems to me, have been, rather, 'Is it good?' than 'What has it cost?'[3]

[3] Those who care to see what the cost of the Houses of Parliament, as designed by Sir Charles Barry, really was, can do so by referring to the Life of the Architect, by the Rev. Dr. Barry. They will find that the sum of two millions, often so hastily assumed to have been expended *by the architect*, can only be made up by adding to the cost of the building large sums for furniture, purchase of property, and other purposes. Great expenditure was also caused by costly and abortive schemes of ventilation, for which Sir C. Barry was so far from being responsible, that they were carried out and altered again and again, *in spite of his protests*. (Author's Note.)

The Italian town-halls.

The period now under examination was a time of transition from ecclesiastical to civil polity. The Gothic of the North had found its strongest support in the Mediæval Church. The burghers and citizens of the South had advanced further along the road of political freedom, and the architectural result was the erection of the noble civic and secular buildings of Italy.

In all important Italian cities we find such monuments, rivalling, and often surpassing, the churches. In some cases, as at Florence, the secular buildings are palaces; and in all, as at Siena, Padua, Vicenza, Piacenza, Cremona, Como, and elsewhere, the Town-hall asserted the importance of the civic rulers. We find it, for the most part, in the centre of the town, dignified in its architecture, with its characteristic bell-tower or campanile, the symbol of power in Mediæval days. The liberty to erect such a tower or belfry was everywhere highly prized as a sign of independence, and we know that this was the case in the North as well as the South, in the '*Free Towns*' founded in France by our own King Edward I., as well as in the prosperous commercial cities of Belgium, and the more stately capitals of the Italian states, with which we are now chiefly concerned.

The Campaniles.

Apart from their special significance, the Italian Gothic campaniles must be deemed rather interesting than admirable in an architectural sense. Rising straight from the ground without buttresses or breaks, usually plain, and destitute alike of ornament and of light and shade, a well-designed upper story is but a poor compensation for so much effort, exerted for so small a result. The Italian towers may perhaps serve as models for lighthouses or chimneys; but they cannot, in my judgment, be allowed for one moment to cast into the shade the merits of our own Mediæval towers and spires. In the plains of Italy, however, they had a special justification, serving both as watch-towers and guides, as well as indicating the power and authority of the cities in which they were placed.

Importance of civic and corporate life in Italy.

In the wars of the factions which tore Italy asunder, Guelphs and Ghibellines in turn assuming the mastery, there was little safety outside the cities. Rural domestic tranquillity was a blessing not to be enjoyed, and cares of

State thus became the heritage of the citizens. Public life, consequently, had great interest for the Italians, and this sentiment influenced their architecture, leading them to give importance to their public buildings. In reviewing, on former occasions, the progress of Gothic architecture in England,[4] I noticed the developments which were successively introduced, all tending to the increase of domestic enjoyment. To the rude Saxon Hall, which was the whole dwelling, and in which the inmates not only ate and drank, but lived and slept, additions were made, first of a few rooms, and then of entire buildings, until the Hall became a mere feature of the whole structure, to which, nevertheless, it often still continued to give its name. We found, as you may perhaps remember, some of our most interesting illustrations of English architecture in domestic buildings; while, apart from churches and other ecclesiastical remains, the structures erected for public purposes were neither numerous nor important; nor could they compare with contemporary or neighbouring examples elsewhere, as, for example, with the beautiful Town-halls of the Low Countries. The progress of architecture thus came, with us, to be associated with the importance and comfort of the individual, while with the Italians it merged these in the corporate importance of society.

Peculiarities of the secular buildings.

The civic buildings of Italy have thus an interest apart from their architecture, and mark, in every sense, a time of transition. The general characteristics of their design do not materially differ from those noticed in the last lecture, in respect of Italian Gothic work generally. The horizontal principle is, however, more marked, and the approach to Classicalism somewhat nearer than in ecclesiastical examples. The Gothic palaces of Venice are all more or less affected by the same influences, which were to give to the Renaissance its approaching victory, and the latter style thus became, in many instances, almost a logical deduction from principles already more or less admitted.

The Ducal Palace at Venice.

Thus, the Ducal Palace has not, at least to a Northern eye, the effect of a Gothic building. The vertical principle

[4] See Lectures II.-IV. (Second Series), pp. 209-272.

is altogether absent, and in its place we have a horizontalism of treatment as marked as in any building of the Renaissance, such as the Farnese Palace at Rome, or Sansovino's beautiful library of St. Mark in Venice itself. The erection of the Ducal Palace, indeed, formed an epoch in Gothic art in Venice, and stood between the earlier types of Byzantine origin and the later Transitional period, which ended with the Renaissance. In it we certainly find the same half-application of Gothic principles which has been noticed before, as characteristic of Italian Gothic.

The town-hall at Cremona.

Similar effects may be observed in other places, and even at Cremona, where, in perhaps one of the most Gothic-looking buildings of the town-hall or civic class in Italy, a free use of the pointed arch is balanced by the absence of vertical piers or buttresses, and by the strongly marked horizontalism of string and cornice. The latter feature is, indeed, specially suggestive of a Classic origin, and characteristic of Italian Gothic. It has not, indeed, the distinct decision of Roman work, nor its bold projections, with the consequent strong shadows. It is composed, usually, of groups of mouldings, of moderate size and prominence, suitable to construction in brick, the material mostly used. Enrichments of regular forms, not always beautiful in themselves, are arranged in horizontal bands of ornament, and below the whole we find small arches sometimes simply arranged like machicolations, and at other times intersecting each other. The cornices thus designed are obviously based upon Classical types, varied in execution, according to the material employed. They are found running round the tops of buildings, and up the sides of gables, in a manner unknown to the Gothic architects of Europe generally.

Contrast of Italian and Northern tracery.

The feature which is perhaps the most striking to the English architectural student on his first visit to Venice, is the tracery of the Ducal Palace, and of the later buildings, the design of which was based upon it. The thick and massive construction is altogether different to the more delicate forms, to which he has hitherto been accustomed. The Northern architects had passed from the lancet shape first to groups of single windows, arranged in threes and fives, as at the Temple Church or York Minster, and after-

wards to more complicated designs. Collecting single windows under a Pointed arch, they next pierced the solid spaces with circles and other geometrical forms, until they arrived at the tracery, so familiar to us in this country. In France, the early window tracery was massive, as compared with its later developments, but it never reached the solidity of the Italian examples. The construction was to be found in the pointed arched head, and tracery formed the mere filling in of each arch. It might be removed, and, as we know, has frequently been removed, without injury to the stability of the building. In the perpendicular windows, indeed, this absence of constructive importance was less frequently found than in the earlier styles, for at this time it was common to carry the mullions up to the enclosing arch, and not only to the springing of the arch, as had been previously done. These mullions acted in such cases as piers or columns, and left but little for the arch, commonly of the four-centred depressed form, to support. In Italy, window tracery seems to have been little admired. It was known, indeed, for it is found in various places, and generally in its simplest types. We may see it, in the case of the nave windows at Florence, and Giotto adopted it in his campanile in a more elaborate manner, as did the architects at Lucca and elsewhere. When the Pointed arch was adopted, however, the more usual course was to use rows of single openings, separated by columns, and fill up the tympanum of the arch over the windows.

The arcades of the Ducal Palace

In the upper arcades of the Ducal Palace, the pointed arch is altogether suppressed, and the tracery is thick, and strong enough to serve as a constructional feature, performing the duty of a support to the structure above.

The details of this arcade, and also of the more Gothic-looking arches of the ground-floor, are so beautiful that the architectural student is tempted to overlook all defects, and we have seen, in consequence, tendencies among modern architects to copy the errors, as well as the beauties, of the Ducal Palace, in combination with forms of Northern Gothic, often not very consistent in general design.

Their half-Classical style

If, however, the arcade in the ground-floor, with its pointed arches, can be said to exhibit a pure Gothic cha-

racter, the same can hardly be declared in respect of the traceries of the next story. If we recur to the definition of Gothic as an arched style, and of Classic as a lintel style, we shall find, on examination, that these thick and simple traceries partake more of the latter than of the former character. They have, in the first place, to take the weight of the superstructure, and convey the pressure, as equally distributed as possible, to the columns below, all of which are of equal size, with the exceptions of the corners, and placed at moderate distances apart. There is no thrust of arches against abutments, strengthened by means of piers, or buttresses, in the Gothic manner.

Their constructional character.

We may next observe that the arches over the columns are of the ogee form, a weak type as regards its power of support. Above and between these arches we have a row of quatrefoils, exactly like one another, and arranged horizontally, the whole being surmounted by a level carved string-course. Regarding the elevation as a whole, and from some distance, the entire mass of this tracery has the appearance of a horizontal band of enrichment, such as might be presented by an ornamental beam built into the wall. It is, indeed, a beam, or lintel of perforated stone, or rather marble, laid upon numerous supports, to which it communicates the strain of supporting the solid walls erected upon it. If you consider the string-course above as the upper flange of such a beam or lintel, and a line, drawn level with the top members of the capitals, as the lower flange, you will find that the strains between the two flanges pass through the solid members of the tracery, very much as they do through the braces and struts of an iron trellis-beam, arranged at an angle of about 45° by a modern engineer. It having been found that the transmission of such strains had a tendency to open the joints of the masonry, iron tie-rods have been added from capital to capital, and thus the type of the lintel construction is fully exemplified. We see, then, in these traceries, an actual element in the construction. They are not application of ornamental detail, which can be withheld or added at will, as the Norman Gothic architect was wont to do; but they form an integral part of the fabric, and take an important share in supporting the weight of the building.

In so doing they ignore the arch, and adopt the opposite principle of horizontal lintel construction.

Their lessons on light and shadow.

The whole arcade is very beautiful, and so unlike anything in our architecture here, that it never fails to charm us; and it is, amongst other things, a remarkable lesson to the architect, as to the disposition of light or shadow. Assuming the propriety of the conception, and taking the quatrefoils of the tracery as forming a level band of enrichment, no sculpture in such a position could produce the effect of these simple forms, with square edges, displaying themselves in clear cut prominence against the shadow behind them. It may well remind us, in thinking out our ideas, that we have to consider, not how to make a pretty picture for ourselves of our own design, but so to work out the same, in thickness as well as elevation, in shadows as well as in surface detail, that the building, when completed, may deserve to be drawn by others, who may pronounce it a true picture in stone.

The upper story and its decoration.

Passing from the arcades to the other portions of the elevations of the Ducal Palace, we find little of interest; for I cannot but think that the admiration which it has received has been due to its associations, and to the charms of certain details, rather than to any excellence of the composition as a whole. Mr. Fergusson, indeed, speaks of the Palace as 'a building which all the world agreed, till very lately, in thinking very ugly.' I cannot myself but doubt the propriety of the heavy box-like upper story, which comes down with apparently crushing weight upon the pierced arcades below; and if it had not been for the relief given by the application of colour to the vast plain surface, the effect would be much worse than it is. The whole wall space, where not perforated by windows, is covered with a diaper pattern, composed of pieces of different coloured marbles. The effect is curious, rather than satisfactory; but if the object were to lighten the appearance of a great unbroken mass, the expedient must be pronounced successful to a considerable extent. The decoration is also applied in a more constructionally appropriate manner than is the case with the thin veneers of marble, placed on their edges, against the wall, to which reference has already been made, as being common

with Italian architects generally, and visible in numerous examples, both in Venice and elsewhere.

The question of surface decoration and its relation to architectural merit.

It has often been debated how far such systems of surface decoration are right, or should be tolerated. Perhaps we have rather too much enunciation of abstract principles in such matters. The use of gilding, or of costly materials, such as marble, will be reasonable in some cases, and objectionable in others. If it be out of place where it is used, it will not approve itself to our sense of what is fitting, and if it be ugly, it will not please the eye. In this manner it cannot satisfy the taste—that sentiment which may be felt, but cannot be argued about on rigid logical principles.

The same thing holds good with the general question of coloured decoration—a point on which any consensus of opinion is very difficult to ensure. No one holds more strongly than I do that Architecture, to be perfect, must avail herself of the co-operation of the sister arts, and combine the beauty of appropriate form with the added loveliness of colour, when this can be done without unduly touching on her province; and if it be asserted that architecture is deposed from her proper place by the doctrine of association of the arts, I would reply that this can never be the case, if she be true to herself. Yet the addition of the work of the sculptor and the painter to a structure will not make the latter architecture, if it be only building; and still less, of course, can such a miracle be effected by the humbler efforts of the decorator or the veneerer.

Illustrated in the Ducal Palace and St. Mark's.

To test the architectural merits of an edifice, in this respect, we may ask ourselves, How would it appear if destitute of the added ornament of colour? If the upper story of the Ducal Palace were painted in a uniform grey tint, could it be admired as a work of art? Take, again, the instance of St. Mark's at Venice, a church which, though small in size, has ever attracted the admiration of thousands. Has such admiration been a consequence of its architectural excellence? If we consult only an outline drawing, or even a photograph, we are unable to account for the praise it has received. We might admire Westminster Abbey, even if it had been whitewashed; but could we surrender the varied hues, the rich mosaics, and the costly

marbles of St. Mark's, without shattering our idol? The unique character of the building, its situation, the bygone glories with which it is associated, the gorgeous mass of colour applied with lavish hand in every space of floor, wall, and ceiling, make up a picture of scenic beauty, which fills us with delight, and drives all architectural criticism from our mind. It is only afterwards, when calm reflection comes to our aid, that we care to criticise this wonderful treasury of gems, and find that it has obtained our admiration rather as a collection of varied details, than as a work of pure architecture.

The source of the beauty of St. Mark's.

St. Mark's is, in many respects, an example of the fusion of ideas, which we see elsewhere in a less conspicuous manner in Italy. The East was ransacked for columns, and Christian art was not too proud to borrow splendour from Mahometan mosques. Byzantine forms and Romanesque ornamentation are blended in a combination of artistic incongruity, over which age, which its hallowing associations, throws its ever potent charm. We have here none of the singleness of aim which seems to reign over the buildings of the North, but rather the richness of accessories, each strong in individual self-assertion, the interest of details, magnificent with marbles, mosaic, and sculptures, speaking rather of the voluptuous refinement of the South, than of hardy vigour on the part of those who, amidst the ruins of the system of Imperial Rome, might have carved out new styles of art, and thus have worked out for themselves a complete and logical development of architecture.

Fusion and borrowing of ideas in Italian Gothic.

In no European country shall we find so much architectural variety as in Italy. Fated, from her geographical position, to be the battle-field of warlike neighbours, her provinces thought to gain safety by isolation, rather than by association; and it has been reserved for modern times to see the scattered pieces welded into a single mass, and to welcome a United Italy into the great family of nations. The same feelings which separated the people in political affairs acted on their architecture, and we find, therefore, Lombard, Byzantine, and Gothic types, striving for the mastery, and, after failing in decisive victory, all agreeing, as it were, to live together in a strange combination of art, the

whole being dominated by that bias towards the olden days of Rome, which the Italians never failed to exhibit. This bias may be seen in the Venetian palaces as clearly as in the ecclesiastical buildings described in my last lecture, and, indeed, it is perhaps in them even more conspicuous than in the churches. The Renaissance came, therefore, the more easily, as a result of habits of thought, which it did not originate.

'*Italia fara da se*' has long been the boast of the Italian people; and yet her architecture, previous to the Renaissance, was not her own. The Byzantine, or Lombard, or, as it has been termed, the Byzantine Romanesque, of which St. Mark's is a typical example, was derived from the East, while the German school influenced other sections of the country; and the largest Gothic building in Italy, Milan Cathedral, is believed to have been designed by a German architect, as was also the purer Gothic church of St. Francis at Assisi.

The Renaissance a national revival in architecture.

When, therefore, to the return to classical literature, a revival of Classic architecture was added, the Italians accepted with enthusiasm an invitation which may well have seemed to them an act of patriotism. The Northern Gothic was tinged by a feudalism which had but little influence on Italy as a whole. The Lombard nobility held their own for a time, and fortified their palaces with towers and walls; but these gave place, as we have already seen, to the town-halls and civic buildings of a people who had early obtained the power to govern. Such a state of things was favourable to the change, from styles which had not been thoroughly adopted, to the older forms of Roman art, which had never been forgotten, but only laid aside for a period. The Italians looked upon themselves as heirs to the Romans, and their inclination was henceforth to return to Classic types for its principles and details. This impulse has not been lost, for while in England we have had many fashions, the architects of Italy have never withdrawn their restored allegiance to ancient Rome.

The study of Italian Gothic by English architects.

In the revival of Gothic art in this country, we first studied our own examples, and, for a long time, no one thought of adopting other forms than those used by the old

Mediæval architects. Increased research, rendered possible by facilities of locomotion, led, first, to the examination and appreciation, and then to the adoption in our work, of details borrowed from the Italian Gothic. It may be doubted if the process has been advantageous to our architecture. I may, perhaps, venture to repeat my warning that any such attempts at fusion require great judgment and caution. I say this, not because we are bound to limit ourselves for ever to forms which our forefathers used, but because, if Italian details please us, it may probably be, in great measure, because they are locally appropriate, and consequently display merits which may not bear transplanting.

Use of brickwork.

I have already suggested to you that in some points, as, for example, in the use of brickwork, the Italians may teach us valuable lessons, inasmuch as they succeeded in achieving with this material results which, notwithstanding its defects, deserve admiration. In Italy the architect will find examples of all kinds of quality of manufacture, and variety of elaboration; bricks for arches and mouldings, bricks for cornices and plinths, with every use of the clay, from the simple wall brick, to the delicate sculpture-like ornaments of the artists in terra-cotta. If we are to cultivate and improve brick architecture, these examples of the manner in which the Italians dealt with a similar problem cannot but be interesting, whether we are called upon to design Renaissance mansions, Gothic parsonages, or Queen Anne manor-houses. To use a material appropriately, and to obtain from it as much beauty as it is capable of affording, should always be the aim of the architect; and let no one imagine that he is likely to develop such results from his inner consciousness, or without careful study of the results obtained by others.

Colour in brickwork to be used with caution.

Poverty of design will always declare itself, and it is, perhaps, never more objectionable than when it puts on the disguise of ill-considered contrasts of parti-coloured brickwork. As I have already pointed out to you, it is the architect's place to build pictures, not to paint them. Beauty of form, both in general mass and detail, good proportion, appropriate and artistic ornamentation, are the objects he should seek; and his effects of *chiaroscuro* will only reveal

themselves, when his design has been carried out. If you are fortunate enough to be able to add to such qualities as I have enumerated the charms of colour, it is well; but to do so satisfactorily, moderation is needed, and you must not think that local colour will atone for the absence of good architectural composition. The Italian architects were not accustomed to vary the colour of their brickwork, which was generally red. Where variety was desired, it was obtained by a sparing use of stone and marble. With us, when it is easy to obtain bricks of different colours, the temptation to use a variegated surface has proved irresistible, and has injured many a good design, cutting it up into small parts, so as to resemble a pavement set on end, or the Tunbridge-ware manufactures, with which we are familiar. Decoration of this kind should be temperately applied, if it is to please, and the lines of colour should have reference to the constructional forms of the building in which it is used. The horizontal courses of black and white marble, which are to be seen in Italy, in such buildings as the Broletto at Como, and the Cathedral at Siena, are open to question in this respect, and the effect would be more pleasing if the contrast of colour were less marked.

The difficulties of damp and smoke in our atmosphere.

The great opponent, however, of colour in English architecture is the damp atmosphere, and the smoke and dirt of our great towns. Public buildings with us begin to lose their beauty almost before the scaffoldings are removed, and the most delicate details, whether of carving or of colour, are the first to disappear in dismal smears of blackness. Until some improvement can be obtained in this matter, the architect's work is somewhat disheartening, and all delicacies of expression in external work are, to a great extent, put out of his reach. In this scientific age will no one spare a little attention to help us? Is chemical discovery, which, in its pursuit of gain, has poisoned rivers, and rendered smiling valleys as bare and desolate-looking as if a plague of locusts had ravaged them, like Egypt of old, powerless to aid in purifying the air we breathe?

LECTURE XI.

EARLY RENAISSANCE.—BRUNELLESCHI.

WE have now traced the influence of Classic reminiscences in the Gothic architecture of Italy—a system which seems to be compounded of rival styles, and in which Byzantine, Lombardic, and Romanesque elements contended for the mastery with Gothic types derived from German or Northern sources. We may now pass on to the time when Gothic was laid aside as barbarous, and the whole intelligence of the nation was concentrated on a revived Classicalism in literature and art.

Special power of the Renaissance in Italy.

Mediæval traditions, and interest in the architecture of the Middle Ages, have never been altogether lost to ourselves, although the great Renaissance architects of England, Wren and Inigo Jones, had little respect for them. Our people prized their own continuous growth, and did not live amongst the fragments of Classical greatness. The Italians, on the other hand, broke at once, and as it would seem for ever, with Gothic architecture. Intent upon the revival of the glories of imperial Rome, and of a civic freedom opposed to the Mediæval spirit, they soon came to dislike the Gothic of the Middle Ages, and even to esteem it barbarous.

Contempt of Gothic as barbarous.

This feeling has continued, more or less, to our own day. Thus we find Milizia (who died in 1798) expressing his opinion, in no measured terms, of the architecture, which, he says, 'declined under Constantine into a heavy disproportioned style, improperly called Gothic.' He adds, 'that in the tenth century, it again changed, and, from the excess of heaviness, assumed an equal excess of lightness; every part was perforated and embattled: this was called the modern

[1] Delivered February 20, 1879.

Gothic, or, for distinction, the Gothic. It revived again in the thirteenth and fourteenth centuries. Finally, arts and science again arose in the fifteenth century, and Greek-Roman architecture with them; or, to speak more correctly, an admiration for them was rekindled.' Writing, afterwards, of Arnolfo's work at Florence, to which we shall presently return, he says: 'This architect showed some slight glimpses of good taste. The same may be observed of the painting of Cimabue, his contemporary. But in everything, physical as well as moral, the progress to excellence is by insensible gradations. The corrupt style, called *Gotico Tedesco*, was continued for some time after that of which we are writing.'

Greater power of Mediævalism in England.

It may seem strange to ourselves, fresh from the Battle of Styles, and the Gothic Revival of our own time, to find the ultimate decision of civilisation thus calmly assumed. The revival of Mediævalism, which we have witnessed in England, has dealt with graver matters than architecture, and has aimed at the renewal of a spirit, without which the return to ancient types in the mere fabric of our churches would seem to its more enthusiastic supporters a mockery and a sham. A time of religious activity has sought to make amends for past coldness and neglect. Society, however it may seem busy with new scientific playthings, may perhaps have even come to suspect that the road to happiness is not really to be found in what men fondly term the progress of civilisation. Men must still turn from the latest philosophies—the newest science—to the old eternal truths, which have brought comfort to countless thousands; and they have been apt to think that, in copying the ancient architectural forms, they might grasp the essence of the child-like faith of olden days.

A mere retrospect will, however, fail to satisfy. Life requires more than a worship of the past—an attempt at an impossible resuscitation. If it should prove beyond our power to endow the revived Mediævalism of our day with the vitality of progress; if it should, on the contrary, appear that the spirit of the Middle Ages has passed away from us, never to return; may it not happen that our descendants will regard the merely formal revivals of the present time

THE CERTOSA, NEAR PAVIA.—GENERAL VIEW. From Fergusson's 'History of Architecture.'

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with as keen a criticism as that which, in former days, once pronounced Gothic 'barbarous,' or, in our own days, declares the Renaissance 'pestilent'? Already, it may seem, from various signs of the times, that the approach of such a feeling begins to make itself felt.

The Early Renaissance.

The Early Renaissance architecture may be studied according to two types. One of these is more affected by the work immediately previous to itself, than is the other. We may take the Certosa at Pavia as an illustration of the former school, and the works of Brunelleschi as examples of the latter.

As we have seen the Italian Gothic tinged by Classic traditions, we shall now find the Early Renaissance of the first type affected by Gothic principles of design.

The Certosa at Pavia.

We have, in the Certosa, a building of great richness, with varied details, many of them very beautiful, but with a complete absence of repose. The contrast, in this respect, with the Duomo at Florence is very remarkable, both buildings having been erected nearly at the same time. The same may be said, although in an opposite sense, of the comparison between the Certosa and the neighbouring cathedral of Milan. No two buildings can be more unlike, although commenced at about the same date. The architects of the Certosa borrowed features without scruple from the rival styles known to them. We thus find the beautiful arcaded galleries surrounding the upper part of the semicircular apses, which are familiar to us in Lombard churches, and of which examples may be found, rendered into Northern language, in the early buildings of Cologne. Circular arches prevail in the windows, but the pointed form is also represented. The turrets, with their spire-like tops, give a considerable effect of verticality, while the enriched cornices assert the horizontal principle. The elaborate structure, half tower, half dome, which covers the intersection of nave and transepts, has a special interest, as being one of the few existing examples, which enable us to form an opinion of what might have been the treatment of the dome by the Italian architects of the Middle Ages. It was evidently designed in accordance with the tradition of the day, altered by an admixture of details intended to be

classical. We find it composed of successive stories of small columns and arches, gathered inwards, till the summit could be crowned by a small octagonal cupola. The general effect is fantastic, and cannot be commended; but it is interesting, as illustrating an attempted compromise between the Mediæval lantern spire and the dome, which latter form was soon to be considered in Italy the only permissible mode of covering a great church.

Taken altogether, much cannot be said in favour of the Certosa, in an architectural sense. It is inconsistent, and its details are wanting in purity of style. Nevertheless, admiration may fairly be bestowed on many of its parts, such as the delicate arabesques in the pilasters of the chief façade, which, though more appropriate to the painter's than to the sculptor's art, exhibit a refinement of design and execution seldom surpassed.

Its transitional character.

Scarcely any other single building illustrates, more clearly, the confusion of ideas which ushered in the Renaissance. The movement was one of vigorous individuality in details, without the controlling authority of a strict general design. The Italians of that period obviously strove for originality of ornamentation, rather than for the classical correctness, so prized and over-estimated by their later architects. At the same time, they turned their eyes to the antique as the real shrine of all that was best in art, and sought to engraft Classic details on Mediæval plans.

If we are startled by the many incongruities of the Early Renaissance, and often feel that, in attempting fusion, excellence on either hand has been missed, we may remember that it was a time of experiments, rather than achievements. The designs of the period exhibit a life and elasticity which might have been turned to better account; and with the greater knowledge of the past possessed by modern architects, it may not be too much to hope, even yet, for a skilful adaptation of a style based upon the works of the first period of the Renaissance.

The completion of the cathedral at Florence.

In turning from the Certosa to the cathedral at Florence, a great difference is at once manifest between the style of the pseudo-Gothic architects of the Lombard district and the semi-Classic designs, which passed for Gothic on the

banks of the Arno. The Certosa was commenced about the year 1396, and Arnolfo died at the commencement of the same century, leaving the arches of his great church unfinished, and his plans for finishing its dome, or domes, altogether uncertain. The completion of this rema kable building was left to Brunelleschi, who finished the dome just before his death, which occurred in 1444. At this period the Certosa had been all but completed, with the exception of the western front, which was not commenced until 1473.

The cathedral as left by Arnolfo.

The Florentine church differs, in almost every particular, from the Certosa. Although the pointed arch and other Gothic details are used, it has not the appearance of a Gothic building from the largeness of its parts, the absence of vertical features, the poverty of its details, and the flatness of its large spaces. The sky line is as simple as that of the other building is broken and confused. Arnolfo is not, of course, responsible for its present appearance, and he may have intended to finish the central area, now covered by Brunelleschi's cupola, in a manner more consonant with Gothic custom. If so, he had prepared many difficulties for himself by the adoption of the enormous dimensions of the plan. It is believed that he lived to see the erection of his building carried out as far only as the springing of the vaulting of the nave roof, and that this vaulting, and the semi-domes of the tribunes round the choir, were executed by others, from Arnolfo's designs, early in the fourteenth century, so that they must have been completed before the Certosa was begun.

Delay and uncertainty as to his designs.

From this point, there seem to have arisen doubt and delay. The foundations of the church had been laid more than a century before the vaulted roofs were finished. The architect had passed away; his plans, if matured, had been forgotten; and the great question of the day with the Florentines was—'How to finish the cathedral.'

It may perhaps excite astonishment that any doubt should have existed as to the intentions of the architect. For so great a work, it might be thought that drawings or models would be previously prepared and carefully preserved. That something of the kind existed is probable, as Vasari speaks

of Arnolfo's model and others, which were lost by the carelessness of the persons who directed the works after Arnolfo's death.

It is therefore somewhat difficult to understand the perplexity of the authorities and people of Florence (for the people, too, had a voice in the matter) as to the completion of their magnificent cathedral. We may remember, however, how soon designs half realised are forgotten. They are smitten with the infirmity of all human things, and the earth is strewn with their ashes. Little more than a century has passed since our own St. Paul's was completed; and yet what diversities of opinion already seem to exist as to the original intentions of Sir Christopher Wren!

Possible design for the completion of the dome or lantern.

Arnolfo had provided enormous thickness of wall, to support a great weight of superstructure. In so doing, he showed himself to be more cautious than the Northern Gothic architects, the weakest parts of whose designs have commonly proved to be the angle-piers of the intersection of the nave and choir with the transepts. He doubtless contemplated an inner dome at a lower level than the existing structure, and he may probably have thought of some aspiring design, recalling, externally, the Gothic lantern and spires. We find something of this sort at the Certosa, and there is a purer and more perfect specimen of the same feature at Chiaravalle, near Milan. In this example, story is gathered over story by easy gradations, and the top rises boldly into the air, as an octagon lantern turret, crowned with a steep spire-like roof. Some such composition, if carried out by Arnolfo with the same character of detail as the rest of his design, might perhaps have gone some way to redeem the flatness and want of scale of the entire building.

Birth and artistic education of Brunelleschi.

If there existed any idea, however, of realising such a conception, it was abandoned altogether at the bidding of Brunelleschi, who came to his task fresh from a visit to Rome, where he had become imbued with a spirit of devoted admiration of the works of the ancients, and determined, if he could, to imitate or surpass, their achievements, and so obtain a share of their fame. A Florentine by birth, he early acquired the friendship of Donato, and with him visited Rome. This journey was the turning-point of

Brunelleschi's career, and determined his subsequent taste in architecture. He seems to have been quite overpowered by the effect upon his mind of the great monuments of antiquity. He saw, as we may be sure, more than we can now discover; for many treasures of art, of all kinds, have since disappeared. He set himself to work, with the ardour of youth, to draw, examine, and measure the remains of antiquity, which opened to him, as it were, a new source of inspiration. Vasari says of him at this time: 'He gave himself up so exclusively to his studies, that he took no time either to eat or sleep; his every thought was of architecture, which was then extinct.' He adds, 'I mean the good old manner, and not the Gothic and barbarous one, which was much practised at that period.'

It may be supposed that his mind was often turned homewards, and that he thought of the unfinished cathedral at Florence, and considered how the Romans would have solved the problem, as yet undecided. We hear that the Pantheon formed a subject of his especial study, and it may well be that his subsequent proposals were based upon his admiration of the simple dome of that unique building. He neglected none of the buildings of old Rome, and made plans of temples, baths, palaces, theatres, the Colosseum, and other monuments, from which he thought he could learn the methods of the ancients. He then returned to Florence, full of the conclusions he had formed, and as eager as any modern Revivalist to extol the merits of the half-forgotten architecture of the past.

His proposals of a new design for the dome.

He found the authorities in the midst of divided counsels and heated discussions. Architects and engineers had been summoned from afar, and were in full debate as to how the work should proceed. Brunelleschi soon declared his opinion that the walls should be carried higher; that windows should be pierced in the upper parts of the walls of the octagon; and that the dome should be commenced at a much higher level than Arnolfo had intended. While making these suggestions, he seems to have kept back his explanation of the actual methods to be adopted in carrying them into execution. They were consequently declared impracticable by rival competitors for popular favour, and

appeared little likely to be approved. In the multitude of counsellors there seemed to many to be wisdom, and in the fierce discussions of the Florentines over the design of their cathedral we may perhaps recognise some likeness to the deliberations of the often distracted and puzzled competition committees of our own day. In such competitions there is too often an inherent weakness. In examinations for Honours at our universities, and in the competitive examinations of our public offices, it is the learned who try the learners, to ascertain their prowess. In architectural competitions it is too often the case that these conditions are reversed, and that real knowledge goes for little against more showy qualities. Designs, carefully considered, are submitted to committees, every member of which would probably confess his ignorance of architecture, and the reputation of a lifetime is imperilled by a popular vote. The competition, if we may call it so, at Florence, ended, as many have done in later times, in discord and confusion; and at last Brunelleschi, who had again withdrawn to Rome, probably in some disgust, was entreated to return and carry out his plans.

Various and strange suggestions for its construction.

It is curious to note the proposals, brought before the authorities, by various competing architects and engineers, as an indication of the helplessness, in matters of construction, which then prevailed in Italy. It would almost seem that the works of the Roman age had been quite forgotten, and even such buildings as St. Mark's at Venice, and the cathedral at Pisa, overlooked. The Byzantine architects of the East had dealt with the problem in their own way, as long back as the days of Justinian, and, in the first century, had given to the world one of the most beautiful domed buildings in existence, in the church of Sta. Sophia. The dome, in that example, though of smaller dimensions altogether than that of Brunelleschi, is far more effective, as a work of art, and exhibits also a greater skill in scientific construction. At St. Mark's, the size of the building was too small, probably, to be much considered by the disputants of Florence; and though the Venetians had always maintained some connection with the East, by reason of their trade and maritime power, such communications were

special to Venice itself, and had little influence upon the rest of Italy. The would-be completors of the Duomo at Florence were consequently thrown upon their own resources, and the expedients proposed by some of them had at least the merit of originality.

The great question was the need of scaffolding, or internal supports, for so vast a dome, while in process of construction. To meet this difficulty it was even proposed to fill up the space with earth, in which money should be imbedded as the mound rose; and that on the completion of the work, permission should be given to the people to fetch away the earth, and keep all the money they could find. This may perhaps be described as the first proposal of a lottery in its simplest shape, and it had no doubt attractions for an Italian populace, for whom such games of speculation have always had a special fascination.

When this ingenious scheme failed to commend itself to approval, other proposals were made for the erection of a central column, or of several internal piers, with arches turned from them, to support a massive scaffolding above, on which the cupola might be raised. It was declared impossible to erect the latter of stone or other solid material; and cysteolite, or sponge-stone, was suggested, as an alternative.

Brunelleschi's design.

Brunelleschi appears to have listened to the proposals made with ill-disguised impatience, and at last roundly declared that they were worthless, and that the dome could be built without such contrivances, and with no sacrifices of solidity of material or of architectural grandeur. He soon shared the fate of those who are in advance of their time, and was voted a dreamer and a madman. He was laughed at as a simpleton, and told to talk of something which he understood, so that he complained that he could hardly pass through the streets without being being pointed at, and hearing the exclamation, 'There goes that fool!'

In the end, however, the Florentines had to claim the assistance which they now despised. The question was referred to the syndics of the woolworkers and the wardens of the church, and they were unable to find any proposal on which they could agree. In their difficulty they turned

again to Brunelleschi, and requested him to lay before them his detailed proposals. It then appeared that he had carefully considered the difficulties of the case, and had already matured plans which he was ready to pledge himself to carry out. His written report to the syndics and wardens contained a full description of his ideas. He alludes to the large dimensions of the building, both in width and altitude; the diameter of the dome being 137 feet, and the height 280 feet. In the case of the Pantheon at Rome (or the Rotunda, as it was called), the width, although greater, being 145 feet, was scarcely exceeded by the height, which was only 147 feet. The dome of Sta. Sophia had a span of only 100 feet, with an altitude of 175 feet. Both those domes were circular in plan and section, but at Florence the problem was how to cover an octagonal space, in a building of Gothic architecture and with pointed arches. Brunelleschi decided that the dome should be octagonal on plan, so as to suit the walls, and that the section should be pointed, that being, as he said, 'the form which displays a rapid tendency to ascend, and, when loaded with the lantern, each part will help to give stability to the other.'

Contrast with the dome of the Pantheon.

By this design a certain harmony was doubtless secured between the plan of the church and the domed roof over it; but, nevertheless, it cannot be said of Brunelleschi's work that it has solved the problem of a Gothic dome. In the neighbouring baptistery there is an example of an Early Pointed dome of octagonal plan, which may well have served as Arnolfo's model in his general design of his far greater work. There was, therefore, no novelty, thus far, in Brunelleschi's suggestions, beyond the scale of the work. His originality displayed itself in the proposal of great height, This was a departure, not only from what are understood to have been the intentions of Arnolfo, but also from architectural precedent, as far as it applied to dome construction. By raising the drum, or story beneath the dome, Brunelleschi evidently desired to obtain a grand external effect, as well as a noble completion of the interior. This has been the aim throughout of the Renaissance architects, and it brings their practice into strong contrast with that of their predecessors. The dome of the Pantheon is perhaps one of

CATHEDRAL AT FLORENCE.—Section of Dome and part of Nave.
From Fergusson's History of Architecture.

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the grandest in existence, and if we could see the interior with its ornamentation, as it was originally designed, it might be considered one of the most magnificent in the world. It has, however, no external effect, and, indeed, is scarcely visible from the outside. The internal design has been the only point considered, and the dome, built of a single thickness, has no external covering or decoration. The centre, where the subsequent architects placed their lantern, adding thereby enormously to their constructional difficulties, is here open, and through the void space the light streams inward, giving a simplicity and sublimity of effect which has never been surpassed by any other method of lighting an interior. The Renaissance architects adopted different arrangements, and did not therefore derive direct inspiration from the Romans in respect of their treatment of the dome.

Contrast with the dome of Santa Sophia.

Nor was the case otherwise with the Byzantine buildings. At Sta. Sophia we find a building domed throughout, which is, to my mind, the noblest architectural interior I have ever seen; but here also there is no attempt to make the dome an external feature of the building. The adoption of curved lines, throughout both plan and elevation, gives to Sta. Sophia, a completeness of effect as a domed structure which cannot be claimed for buildings which adopt a dome as they might any other form of roof, for covering a part only of the interior. In this case there is no sort of incongruity. We have no square or rectangular nave or transepts, roofed over by curved forms. Curvature is of the essence of the plan, and we see at once that a domical completion is the most obvious and natural method to be adopted. The eye passes with delight from the walls to the roof. Niche-like recesses lead to semi-domes, and these carry the interest upwards, till it culminates in the great central cupola, the whole forming one of the most beautiful—perhaps the most beautiful—work of domical architecture in the world.

Comparison with the domes of St. Mark's at Venice.

At St. Mark's the domes are more numerous, but less successful; indeed, the visitor thinks little of their architecture in comparison with the gilded mosaics with which they are covered. In this respect the contrast with Sta. Sophia is very great, for in the latter case the

mosaics have been whitewashed over by the Turks, who use the building as a mosque. If such a barbarism had been perpetrated at St. Mark's, there would be found little in it to admire. We miss altogether the congruity between plan and section of which Sta. Sophia is so striking an example; and the minor domes act rather as rivals to the central cupola, than accessories, leading up to and enhancing the effect of the chief feature of the design.

It is worthy of remark, however, that at St. Mark's we find an essential difference of external treatment. The dome had hitherto been the actual crown of the building. The interior surface formed the ceiling of the church, while the exterior was a visible roof, to resist the weather. At St. Mark's we meet with domes which have become mere ceilings, constructed at a lower level than the exterior leads us to expect, and covered with lofty roofs, having no relation to the forms beneath them. This was the method of the Gothic architects of Northern Europe, though they did not adopt the fantastic shapes which we see at Venice. The groining in our own Gothic cathedrals is not the roof, in the sense that the dome of the Pantheon is the roof of that building: for such groining requires to be protected by an outer roof of woodwork, covered with lead, or other weather-resisting material.

The peculiarities of Brunelleschi's construction.

Brunelleschi's work is rather an octagonal roof, with curved sides, than a dome, in the strict sense of the word. He adopted the Northern method of double construction; but with so little difference between the inner and outer sections, that the whole might be considered a single design. By this arrangement, he obtained the opportunity of availing himself of the whole thickness of the double section, at the points where special strength was necessary, such as the eight angle ribs. Between the angles he placed piers, or internal buttresses, two in each bay, to give stiffness to the filling up of the compartments, and to serve as counterpoises to the thrust of the arch. Between the outer and inner cupolas, Brunelleschi placed a circular ring or bond. This was formed of strong beams of oak, fastened together with iron. It served to tie together the various portions of the fabric, and to give to its octagonal form the support which

could be derived from the arched or circular form of plan. The dome, in fact, became a structure, circular on plan, with extraneous parts added to the circle, so as to become an octagon. The circular bonds were used at about 18 feet apart, and the dome was carried up to a certain height in this manner, without scaffolding or internal support, to the confusion of those who had advised the costly and elaborate expedients before referred to. In Brunelleschi's report he does not, however, venture to promise a full completion of the work without scaffolding. He only undertakes that it shall be carried up to the height of about 60 feet. From this point upwards, he says, it may be continued, 'after such manner as shall be determined on by the masters who may have to build it, since practice teaches us by what methods to proceed.' For the lower part he advised the use of hard stone and marble, and for the superstructure, brick or spongite, for the sake of lightness.

It is curious to mark the reserve which Brunelleschi exhibited in his suggestions. He had not forgotten the contempt with which they had been at first received, or the insults which they had brought upon himself. He seems for the future to have contented himself with pointing out the step to be taken at once, while leaving his future intentions vague and undescribed. The Florentine authorities did not thoroughly trust him; for they associated with him Lorenzo Ghiberti, known to us for his famous gates to the Baptistery, who appears to have enjoyed in some respects a fuller measure of their confidence. We find Brunelleschi brooding over this mark of distrust, preparing his models in secret, and referring objectors to Ghiberti, as to difficulties which he felt sure that he could not solve. At last he succeeded in getting left alone, and was appointed sole architect of the fabric for life, with an annual allowance of 100 florins. At this time the cupola was but partially completed. The rest was superintended by Brunelleschi alone, who conducted the works henceforth with such solicitude, that it is said there was not a stone laid in the building, which he had not personally examined.

The cupola thus proceeded, and, as it rose, the reputation of its architect rose with it. In order to facilitate the

Progress of the work towards completion.

progress of the workmen, he erected a scaffolding inside the dome, although there is no record of the use by him of any centring for the arch. On this scaffold he placed, amongst other things, wine-shops and eating-houses for the workmen, so that the latter should not lose time by descending for refreshment. The citizens were now eager to honour the man who had once seemed to them a fool, and he was accordingly appointed one of the *Signori*, or magistrates. At length, as he was approaching his seventieth year, the two cupolas were all but finished, and nothing remained but to add the lantern, above the circular space, or eye, at the top of the building. In accordance with his usual dilatory custom, Brunelleschi had left this matter unsettled, and, while he was engaged on the models of this final detail of his work, the end came.

Death of Brunelleschi, and subsequent addition of the lantern.

After his death the models were disregarded, and laid aside, and the present lantern was added by others. A commencement had, however, been made by Brunelleschi, on a grander scale, so that many doubted the wisdom of loading the dome at this point with so much weight. Brunelleschi died in 1446, at the age of sixty-nine, and was buried in the church to which he had devoted the best years of his life. His epitaph declares him famous, as the restorer of the practice of ancient architecture, and he figures, therefore, worthily in the list of the Fathers of the Italian Renaissance. He found the Gothic styles of Italy in vogue, but to him the glories of old Rome were the guiding star of his architectural course. He left nothing undone to promote the change to that which he considered the more perfect way, and, when he died, his mantle fell on other great artists, who were henceforward to conduct the movement, and whose works will claim our attention hereafter.

Constructive skill of his design.

If we are to form a just estimate of Brunelleschi's skill, we must not forget the small amount of constructive ability shown by the architects of his day. It is a great stride in scientific building to the Dome of Florence from the petty arches of the Italian Gothic, which required to tie even such pigmy structures as the tombs of the Scaligers at Verona with iron bars. As an example of clever building, therefore, the cupola deserves all the praise it has received, and it is

none the less interesting because it is impossible to suppose that another like structure will ever be erected in a similar manner.

Construction, however, is not fine art, any more than engineering is architecture: and, to most persons, the effect of the great dome is disappointing in an artistic sense. As regards the exterior, it may be doubtful whether an octagonal structure on so large a scale is not a mistake. A circular dome, if beautiful at all, is beautiful from all points of view. St. Paul's, and, to a somewhat less extent, St. Peter's, is a noble object, from wheresoever seen. An octagon with a curved outline, on the other hand, presents a different appearance when viewed from the front in elevation, and when seen on the angle, and it would seem scarcely possible to design it in such a manner that it shall look equally well in both cases. Artistic merits and defects.

It is, moreover, a less stable form than the circular plan, and we have found that Brunelleschi had to combat with self-imposed difficulties in this respect. We do not, indeed, see the evidence of these difficulties in the cupola as completed; and it may, therefore, perhaps be felt that they do not affect its beauty. There is, however, an absence of that complete satisfaction to the eye which arises from the perfect and obvious fitness, necessarily characteristic of all good architecture.

The dome is, moreover, too high for the internal effect of the church. It cannot be seen until the visitor is near to it, and looks up to it. In this respect, the original design of Arnolfo, springing from a lower level, would, doubtless, have been superior. The construction of a cupola, which shall be equally successful as regards both exterior and interior, has perhaps never yet been satisfactorily accomplished. The Gothic architects acknowledged the difficulty by their adoption of spires, and Sir C. Wren by his well-known expedient in the case of St. Paul's.

At Florence, we have a bold and meritorious attempt; and, if it be not perfectly successful, the grandeur of the idea and the difficulties surmounted are enough to cover the name of Brunelleschi with glory. He had been the pioneer in a great movement, and had extorted admiration from un- General estimate of his work.

willing lips. His fame does not rest on a single work, for in the churches of San Lorenzo and Santo Spirito, we find further evidences of his skill in adapting Roman precedents, while in the Pitti Palace he is seen striking out a path of his own of even greater originality. A certain ruggedness, with massive strength and simplicity of form, distinguishes Florentine work, and in Brunelleschi's hands this was dominated by a devotion to the traditions of ancient Rome. In them, he found the inspiration which led him to apply the experience he had acquired, by the study of the baths and temples of the Imperial City, to the addition of an unrivalled cupola, constructed on Roman principles, to the unfinished structure of a Gothic church.

LECTURE XII.[1]

SECOND PERIOD OF RENAISSANCE.
BRAMANTE AND SANSOVINO.

Progress of the Renaissance movement.

AT the time of the death of Brunelleschi, in 1446, the Renaissance in architecture was an accomplished fact. The Italian architects had agreed to look for precedents to the remains of ancient Rome. We found Brunelleschi applying a taste, founded on such study, to the completion of a cathedral designed by a Gothic architect. Such an act tells its own tale of the Transition which was then in progress. It was consummated in the time of the immediate successors of the great Florentine architect.

While Brunelleschi was engaged in Florence, the Renaissance was making converts elsewhere, and the name of Leon Batista Alberti deserves a word of notice. Contemporary with Brunelleschi, he died soon after him, in 1472, having previously designed some important buildings in the neo-Roman style, then fast coming into use. His case is the more interesting, as being typical of the Renaissance movement arising from a general revival of interest in Classical literature. For Alberti was well born and well educated, and his affection for the classics was so great that he adopted Latin in his writings, and even in his conversation.

St Andrea at Mantua.

Turning his attention to architecture, he did his best, both by precept and example, to revive the ancient manner, and his church of St. Andrea at Mantua is interesting, as being one of the earliest of the Renaissance edifices. The design is one of much refinement, and the employment in it of Classical details is marked by a free spirit of adaptation, rather than by one of servile copyism. The plan, by its cruciform arrangement, is consistent with Gothic tradition,

[1] Delivered February 27, 1879.

while the semicircular arched roof, and the crowning dome, illustrate the style, which was now asserting its claim to rule the architecture of Italy. The treatment of the aisles, or rather their suppression in favour of chapels, rendered it possible for the architect to adopt a simple system of vaulting, recalling the designs of the great Roman baths. The same may be said of the ornamentation of the decorative portions, which is more suited to a secular building than to a church. The design has the merit of consistency, as a work of art, although we may refuse to it that of fitness—a no less essential condition of satisfactory architecture.

Exclusive devotion to the old Roman architecture.

It deserves remark that the Renaissance was based throughout on Roman ideas. The beauties of Greek architecture were a sealed book to the Italians till long afterwards. Roman art was at their doors; it was the work of those whom they claimed as ancestors; it was like a relative at the gate knocking for admission. It is matter for regret that this was so. If the great men of the Early Renaissance had been acquainted with the pure and noble architecture of Greece, from which their favourite Roman style had been evolved, their work must have gained both in truth and refinement. In this respects modern architects have not the same excuse, if they fail to benefit by the knowledge now placed at their disposal.

The early examples of the new style encouraged the hope that, in hands like those of Alberti, a free development might result, so that architectural art might take a new departure, based upon existing Classical forms. This hope was only partially realised; and, at last, the pedantic rules of the later architects placed correctness of precedent before every essential artistic principle.

Limits of architectural imitation of the past.

In modern practice, if the architect is to claim the title of professor of a reasonable calling, it is impossible that he should bind himself absolutely by tradition. He must learn to use his art with freedom, and there is little wisdom in an arbitrary selection of a special period of historical art, if he is to seek to bend the wants of to-day to its rigid forms, rather than adapt and modify the latter to satisfy the requirements of his own time. The enthusiastic temper of revivals is not always favourable to the calmer maxims of

common-sense; but, nevertheless, our architecture, if it is to be more than a passing fashion, ought to be ruled by reason.

Enthusiasm for Classicism in Italy

In Italy, at this period, enthusiasm carried all before it, and the direct imitation of Roman buildings, even to their faults, became common. At Rome, the Popes caught the infection, and all were in haste to realise the promised glories of the new style. The rebuilding of St. Peter's became an epoch in art, and to this day its effects are visible. It might have been supposed that, at Rome, if anywhere in the world, and by the Popes if by any persons, the preservation of ancient buildings would have been religiously insisted on. Such a spirit is, however, rarely to be detected in architectural history. Men might be, and indeed were, so influenced by old associations, or prejudices, that their work was unconsciously affected by them; but a deliberate preference for old things, because they were old, was as rare with our Mediæval forefathers as with the art-reforming Popes of the Renaissance. A sublime confidence led both the one and the other to remove without scruple the works of their predecessors, that they might substitute their own. We have learned to be more diffident, and, as we have not been able to agree on a school of architecture, to whose dictates all must bow, our love for ancient work, and desire for its preservation, are both right and logical; although it is, of course, possible to press such sentiments too far, till they become extravagant and provoke reaction.

St Peter's at Rome.

However we may decide in the nineteenth century, conservatism in art was not the rule in Rome at the time of which we are treating. The old and venerable basilica of St. Peter was neglected and tottering to its fall. Erected in the age of Constantine, and reputed to mark the place of the martyrdom of St. Peter, it had, we might suppose, a special claim on the reverence of the faithful. Of magnificent dimensions, it could not be accused of deficient accommodation. Although the exterior might have been deficient in architectural dignity, the same could hardly have been said of its internal effect, with its double aisles, and their long vista of columns. Those who have seen the basilica of St. Paul without the walls at Rome, will be able to realise somewhat of the effect of old St. Peter's.

Restoration, or preservation, would have been the course to be adopted, according to our judgment of such things now; but this was not the view of the Popes or their advisers. Everything must be changed. The basilica, however venerable, had an incurable fault, which many of us have, and all are contracting. It was old, and it was getting older. It must go, and in its place must rise a new St. Peter's, a wonder of the world, the greatest and most splendid church which had ever been seen.

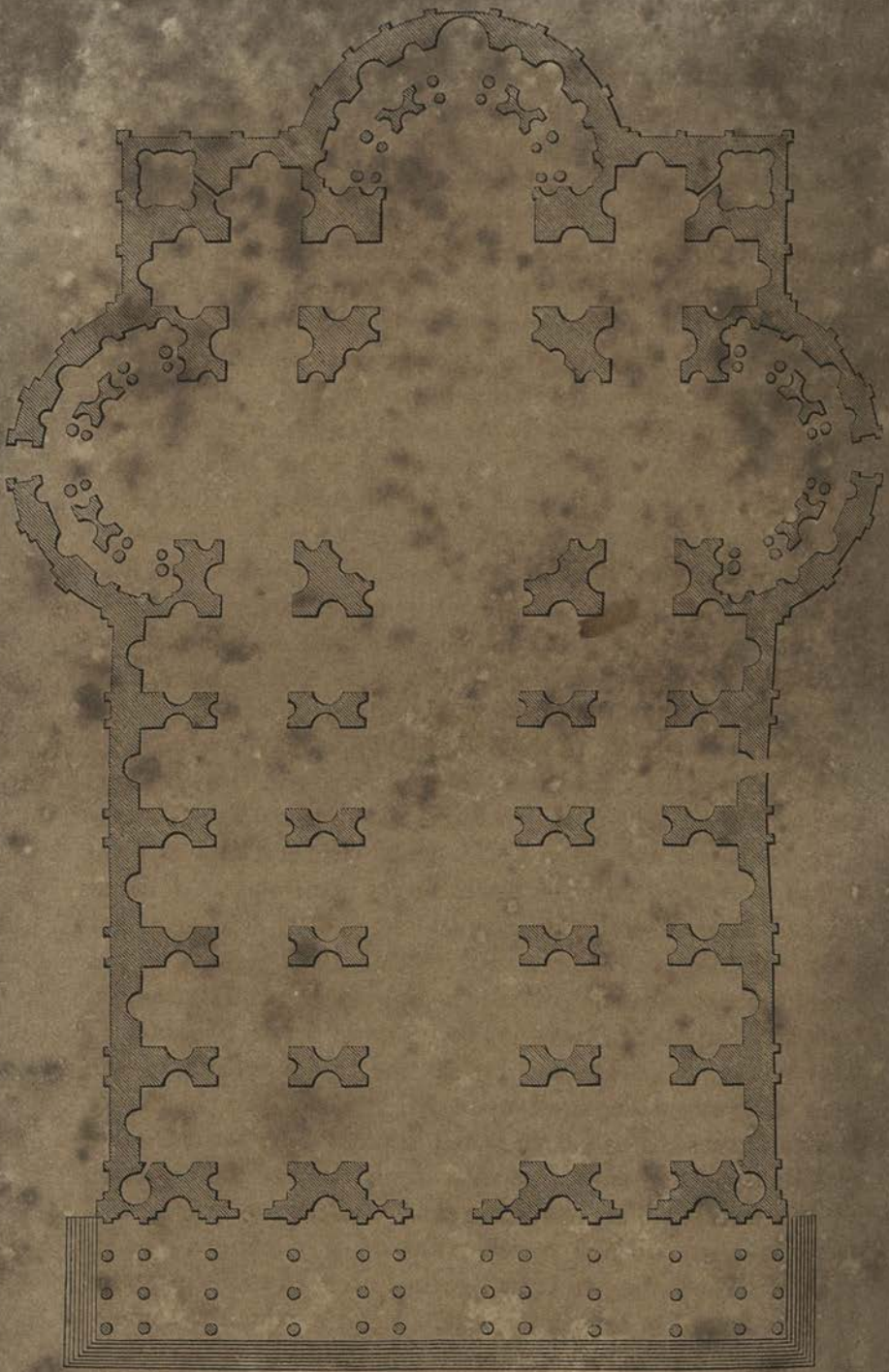
Bramante —his birth and artistic education.

Such was the decision of the Papal Court, and, when Julius II. was raised to the pontifical chair, he eagerly sought for an architect imbued with his own taste, energy, and enthusiasm. He found such a man in Bramante, who was born just as Brunelleschi died, and on whom the mantle of the latter seemed to have fallen.

Born of poor parents, he soon displayed a taste for drawing, and was encouraged by his friends to become a painter. Finding architecture more to his taste, he travelled first in North Italy, to inspect the architecture of that district, and then turned his steps to Rome. Here, like Brunelleschi, he was fascinated by the ruined monuments of the ancient city, and set himself to work to measure and study them with labour and research. He thus acquired, not only accurate general ideas, but also a knowledge of details, such as mouldings, consoles, vaultings, &c., which no one had hitherto possessed, so that Michelangelo subsequently declared that no one had yet excelled Bramante.

The Cancellaria.

It is unfortunate that we have not fuller materials for estimating his talents; for, even at St. Peter's, very little of Bramante's work remains. He was largely employed by Pope Alexander VI., as well as by Julius II., at the Vatican. The Palace of the Cancellaria was partly designed by him, and is remarkable for refinement of detail. We find in it no signs of that worship of bigness, which was to triumph at St. Peter's after Bramante's death; on the contrary, the parts are small, and perhaps even over-minute. The introduction of pilasters in the two upper stories, a common expedient of Renaissance architects, has met with criticism, and it may be admitted that it is open to question, both in this example and elsewhere. At the Cancellaria the pilasters are too much



ST. PETER'S.—Plan of Bramante.
From Fergusson's 'History of Architecture.

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scattered over the surface of the elevation, and are not happily grouped. Their smallness of parts is also inconsistent with the plain, and even severe, character of the rusticated basement, and, though well proportioned in themselves, they appear unsatisfactory, because out of place.

Other works of Bramante.

Another work of Bramante was the Belvedere Court of the Vatican. Owing, it is said, to undue haste in building, the few remains of the design have needed so much alteration that no opinion of the original effect can now be formed, while most of Bramante's work has been removed in consequence of alterations and extensions of the Vatican. Bramante did not leave behind him the reputation of a good constructor. His building operations were hurriedly conducted, and in such matters the Italian maxim of, 'Chi va piano, va sano,' holds good. When architects are criticised, it is often forgotten that they are commonly pressed to complete their works in too short a time. Bramante committed an error of this kind, and his work, even at St. Peter's, suffered in consequence. But we can still see that in his hands the exuberance of the Early Renaissance became chastened by a more severe taste, and luxuriance of detail gave way to a grandeur of style.

His plan for St. Peter's.

When summoned by the Pope to advise on the rebuilding of St. Peter's, Bramante was prepared to rise to the occasion, and submitted a plan of great size and pretension. The arrangement was that of a Latin cross, with five bays of nave arches, and three tribunes for choir and transepts. A dome marked the intersection of nave and transepts. The principal tribune, which is at the western, instead of the eastern, end of the church, was erected before the appointment of Bramante, from the designs of Rosselini, by order of Pope Nicholas V. This tribune was retained by all the other architects who were afterwards engaged upon St. Peter's. In his early travels, Bramante had been much impressed by the cathedral at Milan, and had conferred with those who had the direction of the works. This building had a German origin, and exhibits many of the peculiarities of a Northern Gothic design. The influence it had gained over Bramante's mind is to be traced in his plan for St. Peter's, which resembles the design of a northern cathedral, in its division into nave, aisles, choir, and transepts. The semicircular terminations

of the latter were due to the previous existence of the Western tribune.

There is a general disposition, from Bramante's great reputation, to credit him with a good design for the exterior of St. Peter's. It may doubtless be assumed, from his work at the Cancellaria Palace, that he avoided the error of the gigantic order which has been adopted in the existing building. Indeed, the pilasters indicated in the plan ascribed to him are of small dimensions. It was his misfortune, however, to leave behind him few illustrations of his proposals, and we are, consequently, left very much to conjecture. At Bramante's death, in 1514, the work had not far advanced. Raffaelle and Peruzzi followed him as architects, and passed away in rapid succession, after which the work was entrusted to Antonio San Gallo. The design of this artist is preserved, and it is probable that it was based to some extent upon the proposals of Bramante, modified by his own views.

Probable characteristics of his external design.

Bramante's plans are of too vague a nature to explain the details of his design; but from his ordinary practice some notion may probably be formed of the manner in which he would have treated the exterior of St. Peter's. The general arrangement of his plan gives, in the first place, a greater number of piers and arches, pilasters, niches, and other details, than we find in the existing building. The slight projections indicate the intended employment of a small order in place of the great columns and pilasters subsequently erected. Bramante seems to have been fully aware of the advantage of scale in a design, and knew that a mere magnifying of details was not enough to produce a grand building. Both in his church at Lodi, and in the dome which he added to the church of Sta. Maria delle Grazie at Milan, he preferred to place columns over columns, rather than resort to the dangerous expedient of a large single order. We may presume, therefore, that he would have carried out similar principles at St. Peter's, and that the building, in his hands, would have at once impressed the visitor with its vastness, instead of leaving that result to be reached, if reached at all, as at present, only by a process of reasoning and comparative observation.

San Gallo's design was evidently based on Bramante's

ST. PETER'S.—PLAN OF SAN GALLO.
From Fergusson's 'History of Architecture.'

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principles, carried possibly to extreme. After the death of the latter, however, the Renaissance architects seem to have sought simplicity in exaggeration. Nothing was too large; and scale and refinement were lost in the vulgarity of mere size. It is at this point that the Renaissance lost much of its charm, and even the genius of Michelangelo fails to reconcile us to the change. Notwithstanding such divergence of principle, however, Michelangelo had a genuine admiration for Bramante. He wrote: 'That Bramante was equal to any architect who has appeared from the time of the ancients to our own, can by no means be denied. The first stone of St. Peter's was laid by him, not after an obscure or confused plan, but in accordance with a design which was clear, comprehensive, and luminous. He had, besides, so isolated the church, that it was in no respect detrimental to the Palace, and those who have departed from the plans of Bramante, as San Gallo has done, have, in so far, departed from the truth.' He further denounced severely the design of San Gallo, not in respect of its details, which present many points of criticism, but on the ground of the multiplicity of features. He declared that 'it was broken into too many parts, and, with an infinity of columns, would convey the idea of a Gothic building rather than of an antique or classical one.'

San Gallo's plan, and Michelangelo's criticism thereon.

In this censure we have a key to the artistic feeling of the time. The period of copying had set in. Any lingering love for the Gothic style was to be cast out; the Transition, with its attempts at fusion, was over; and every building was to be, more or less directly, imitated from the antique remains. The five orders became the rule for the future, and the great difficulty of Renaissance architecture has always since been in the right use of columns. If they are too few and large, they injure the scale of the building, as at St. Peter's; if they are too numerous and small, they produce a pettiness of effect, as in San Gallo's design. In the first case, they arouse the same feelings which are excited by colossal statues, with their exaggerated features. In the second, they tend to confusion, and the loss of simplicity of general effect. Michelangelo's assertion of the quasi-Gothic appearance of San Gallo's design was not unfounded, although it was, in truth, less uncomplimentary

The transition to Classicism complete.

than he intended. One of the greatest merits of the Mediæval architects is to be found in their realisation of scale. They delighted in the use of small parts, frequently repeated. Moulding upon moulding, arch beyond arch, and piers in long ranges, give an idea of size, and charm of perspective, in many a humbler edifice than St. Peter's, which the latter cannot rival.

Bramante's design for the dome.

Bramante was clearly right in his preference for orders of a moderate size, and his introduction of them into his buildings, already referred to, may be studied with advantage. It may, I think, be concluded that he would not have raised the dome far above the rest of the building. A great admirer of the Pantheon, he intended the dome of the Basilica to be of the same design and dimensions; and the boast afterwards attributed to Michelangelo, that he would 'raise the dome of the Pantheon into the air,' probably referred to the lesser altitude proposed by Bramante. San Gallo had already adopted the principle of height when Michelangelo criticised his design; but this took place long after Bramante's death, when the whole question of finishing St. Peter's was in a state of chaos, and his original designs already obsolete. They were then, indeed, probably regarded with some disfavour, for, owing to the undisciplined zeal of Pope Julius, the work executed in haste by Bramante was already showing signs of weakness and incipient decay. We may perhaps suspect that such a discovery was not unwelcome to those who already contemplated the erection of a dome more lofty and weighty than Bramante intended. The piers which he erected were evidently not designed to support so great a burden, and the hypothesis that he wished to repeat the more moderate design of the Pantheon is thus strengthened. Beautiful as the present dome of St. Peter's may be, it is to be regretted that Bramante had no opportunity of carrying out his design, or some similar design, on a grand scale. The fault of the present dome, as seen from within, is its great altitude in proportion to the width, the dome being two diameters and a half high. The Pantheon has a height of only one diameter, a proportion undoubtedly more favourable for internal effect.

The time of Bramante has always been considered the

best period of the Renaissance, and he occupied the foremost place among the architects of the new faith. Both his early training, and his later convictions, led him to appreciate beauty of detail, as well as greatness of conception. Familiar with the works of the Lombard architects of North Italy, and the employment by them of small clustered shafts, he was not tempted by the comparatively colossal dimensions of the old Roman columns. Although full of Classic feeling and even prejudice, he yielded but little to the temptation of actual copying; and his designs show an attempt to adapt the style to the requirements of his day, which is the only reasonable justification of a revival. His designs appear to have been based, as regards conception, on the simplest and most noble forms, such as the Pantheon; and as regards details, on the architecture of the Roman theatre, with its numerous features of small niches, pilasters, and ornaments, all of them susceptible of elaborate treatment in their decoration. After the time of Bramante and his contemporaries, the Renaissance entered into a new phase, less satisfactory and artistic; and it has thus happened that many persons have passed a wholesale condemnation on the entire movement, and have been blind to the merits of Bramante and other artists, who worked for the same ends and at the same time.

The Renaissance at its best in him.

One of the most famous of these was Sansovino, who had begun palace-building at Venice, while Bramante was engaged at Rome in carrying out the Pope's dream of a Christian temple, which should surpass every building of ancient or modern times. The Renaissance appears to special advantage in Venice. It seems to have been more easily adapted to secular than to sacred purposes, and the palaces of Sansovino and his brother architects rival the works of their Gothic predecessors. Being isolated from Rome politically, no less than by reason of distance, the Venetians had less knowledge of the antique, and were more free in their treatment of Classical precedents than other Italian revivalists. They were also already in presence of noble Gothic buildings which might well excite their emulation; while in their semi-Classic adoption of the horizontal principle, such buildings seemed to lead the way to fusion

The Transitional period at Venice.

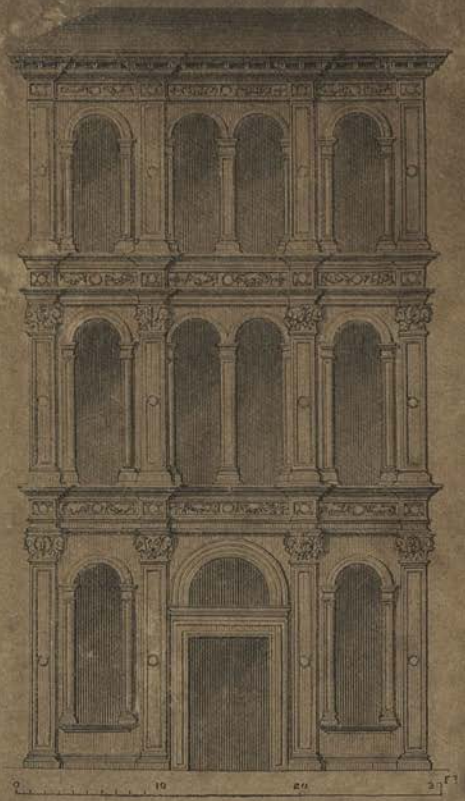
rather than to forbid change. The Transitional period of the Renaissance lasted longer in Venice than elsewhere, and the non-Gothic portion of the Ducal Palace (the north-eastern angle of the courtyard) was not completed until the middle of the sixteenth century. In the design of this work, semi-circular and pointed arches appear in the same composition, with pseudo-Classical pilasters and clustered shafts of Gothic origin. The general effect recalls the unchastened richness of the Certosa, and the sculpture is profusely distributed over the surface of the elevation. The execution of the latter is good, and the whole presents a not unsuccessful attempt at the treatment of an internal court; though, for an important exterior elevation, there is too little dignity of general conception, and too much confusion of detail.

The Grimani Palace.

The later palaces of Venice exhibit Classical details, adopted more extensively, and applied less intelligently; for too many of their façades are mere frontispieces, to which are attached columns and pilasters, which serve the purpose of mere decoration. Thus at the Grimani Palace we find no less than three orders employed. This building has many admirers, but I do not consider it an undoubted success. The treatment of the three stories is monotonous, and the proportions of the openings ungraceful, and not consistent with each other. The columns and entablatures seem to be built up against the front, without forming part of it; while a definite design of the actual wall is interrupted by the orders, so that the effect is that of a completely designed building of plain character, seen through an intervening screen of columns, interposed for ornament only. The Casa Grimani, however, has many merits, and the details of the various orders, the delicacy and finish of the ornaments, and the dignity and solidity of the general effect, deserve the admiration they have received. Not the least of its good points is that it is placed upon a good and solid basement, and thus seems to stand, as it were, upon a rock among the waters.

The Camerlinghi Palace.

A design which is, to a great extent, free from the objections above mentioned, is to be seen in the Palazzo Camerlinghi, near the Rialto. This, although only a small façade, is a pleasing example of the use of Classic details, without



CAMERLINGHI PALACE, VENICE.
From Fergusson's 'History of Architecture.'
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GRIMANI PALACE VENICE.
From Fergusson's 'History of Architecture.'
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a wholesale reproduction of an order and all its parts. There is here an absence of the duplex system of design complained of at the Grimani. The pilasters employed take the character of piers, forming part of the wall, which they strengthen. They have, moreover, an effect of their own, and do not repeat too literally the details of a regular order. They are, in fact, panelled piers rather than pilasters, and it is evident that such a design gives scope for an artistic treatment of the panels beyond that which has been adopted. The openings are designed in a manner which recalls the earliest Renaissance examples, being of proportions more usually seen in Gothic than in Renaissance buildings. The details of the window jambs are small and delicate, and the grouping of the whole with the central window, of two lights, separated by a mullion, is agreeable and suggestive. On the other hand, the windows are too high for their width, and the whole elevation presents a somewhat cramped appearance, and would gain greatly by lateral extension. The lower story is the least satisfactory portion. The adoption of panelled pilasters here, as well as above, gives it an insipid character, marked by too much sameness. The details are, moreover, too fine and delicate for the rough usage which an entrance must expect, particularly from the gondoliers at Venice. The large arch over the doorway does not appear consistent with the smaller arches of the windows on either side, and there is no correspondence in the line of springing. It would have been better if the pilasters of this story had been omitted, and a plainer treatment adopted, with rusticications, and a bolder character of design given to the doorway, as in Florentine work. A projecting balcony on the first floor would properly have crowned such a story, while correcting the exaggerated length of the windows of the first floor. Taken altogether, however, this unpretending example well deserves attention from architects, who, like ourselves, are often called upon to design buildings in places, such as London and other large towns, where land is too valuable to allow us much wealth of space, and light is of such importance that we are compelled to obtain as much window area as possible.

The most important of the Renaissance palaces is the

The Library of St. Mark.

great work of Sansovino, the Library of St. Mark. Placed exactly opposite to the Ducal Palace, it challenges a somewhat unequal comparison. On architectural grounds alone the Library may well hold its own; but the interest men feel and express in the Ducal Palace is not purely architectural. The latter building is connected with the distant past by associations which are full of romance, mystery, and interest. Sansovino's work stands before us on its merits alone, as a work of yesterday, about which everything is known, and which has not had time to grow venerable. It was designed for modern use, and appeals to modern ideas. We have here, in one spot, representatives of the rival styles of Gothic and the Renaissance—of the old and the new. We have been told that the latter must be pronounced inferior, because artists do not sketch its parts, and fill their commonplace books with its details. If this be so, we must not forget that men do not regard such matters apart from historical associations, and it may be remarked that, while no one has proposed to copy for modern use the Ducal Palace, the Library of Sansovino has found many imitators. The effect of the latter design, as a whole, is certainly very good. The orders of columns are well proportioned and detailed; and the small window columns in the upper story are skilfully introduced, so as to give scale to the larger order. The proportions of the arches recall Roman precedents, and contrast agreeably with the elongated types used in the Camerlinghi Palace.

Sansovino was a sculptor as well as an architect, and it is probably to this circumstance that the profuse ornamentation of the design is due. Greater restraint would perhaps have been wiser, and partial suppression would have added to the value of the remainder. At the same time, the sculpture itself is well designed and executed, and we feel we must take the design as it is, and regard it as a whole. It is certainly one of the best of the Renaissance palaces, and though it is doubtless liable to the charge of imitation of the Roman orders, if that be admitted to be a defect, it must be confessed that very few architects of more recent times can afford to throw stones at Sansovino.

It may perhaps be worth while for some architectural

LIBRARY OF ST. MARK AT VENICE. By Sansovino. End Elevation.
From Fergusson's 'History of Architecture.'

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critics to consider how far such reproduction of ancient details is, of itself, an unpardonable defect, and how far it is a special reproach of the Renaissance. That mere unintelligent and wholesale copying is to be reprobated, must of course be granted *in limine*; but, unless we are to have that dream of enthusiasts, an original style, perfect in all its parts, recourse must be had to precedents. A Gothic shaft, with Early English foliage, affixed to a wall, is as much a reproduction, and an applied ornament, as a Doric three-quarter column or pilaster, treated in the same way. The former has often, indeed, the less constructional justification; for, while the Classical column strengthens the wall, and forms a part of it in the actual building, its Gothic rival is in many cases a mere piece of added decoration unnecessary to the structure, and not placed in position until the building has been finished.

The reproduction of ancient details considered critically.

We must use the old styles, though it should be our aim to adapt them to modern use. With the traditional styles, certain details have come to be so intimately associated, that the absence of them, or their indiscriminate association with other forms, shocks us, like a false quantity in poetry, or a *lapsus linguæ* in speech. Any fusion of diverse architectural schools is consequently a task of the greatest difficulty, needing severe restraint, great caution, and abundant knowledge. The architectural student requires to be on his guard in this respect. Our fashions of public taste change so rapidly, that in search of novelty he may be tempted to snatch at a fleeting popularity, by ignoring the sound principles on which architecture should rest; and may allow himself to believe that a general hotch-potch of features, taken indiscriminately from the monuments of the past, is to be the style of the future.

Originality rashly sought.

This is sometimes thought to be a right use of freedom, and is miscalled 'originality,' when it rather merits the name of 'carelessness.' It is an offshoot of the same spirit which seeks to attain a so-called picturesqueness of plan by throwing the parts together at haphazard, with little attempt at arrangement and less thought. It has been well said by Sir Joshua Reynolds, of such a system of composition, or rather neglect of all principles of composi-

tion, that 'simplicity, when so inartificial as to seem to evade the difficulties of art, is a very suspicious virtue.' If a laboured system of symmetry be displeasing, what can be said of artificially devised irregularities, not justified by the circumstances of the particular case?

Symmetry and picturesqueness.

The Renaissance architects have been much censured in modern times for the regularity of their designs, but in a complex art like architecture, which demands scientific treatment, the presumption must be in favour of regularity in buildings of importance. It is not only the Parthenon, or the Renaissance palaces, which accept this principle; it is found admitted in practice in the best remains of Mediæval architecture. What can be more symmetrical than the plan of any great cathedral, with aisle balancing aisle, transept corresponding with transept, sometimes tower with tower? Although a skilful architect will decline to be controlled by an absolute symmetrical law, he will always remember that symmetry appeals to a natural instinct, and that good reasons should exist, if it is to be disregarded in his designs.

The early works of the Renaissance are full of variety, and gain picturesqueness at the expense of dignity. The later examples reversed the process, and have been complained of for cold and uninteresting correctness. This may doubtless be urged, with truth, against some of the buildings erected in the decadence of the movement; but, as it seems to me, it does not fairly apply to the designs we have just now been considering. Sansovino's Library is certainly not more, but less, regular and monotonous, in general design, than the Ducal Palace; and there is even too much variation of detail in the small façade of the Camerlinghi Palace.

The limits of possibility of novelty.

The aim of the architect should be to apply the knowledge he possesses, with intelligence, consistency, and beauty. He need not be too much afraid of the cry for novelty. If the Renaissance architects have failed in their attempt to reconcile the antique with the modern, no appeal to authorities will save their work from condemnation and their principles from neglect. On the other hand, if they succeeded in proving that the old architecture of Greece and

Rome was capable of a development which can meet the altered circumstances of modern society, the accusation of copyism will not destroy their influence.

While I advise the young student of architecture to make the most of his opportunities of studying the various forms his art has assumed in the past, I do not for a moment say that he should copy all he sees. He is to gather facts from the experience of others; he is to use his knowledge to improve his taste. Let him by all means choose his own line, and attach himself to whatever school of practice he deliberately prefers. When he has done so, he should study it in all its parts and varieties, and he may depend upon it he will find that originality springs best from knowledge. We distrust the easy novelty gained by laying aside the restraints of good taste, as we find eccentricity in society a poor substitute for good breeding.

The actual forms of architecture obviously do not admit of indefinite variation. The possible curves of an arch, or shapes of openings, are soon exhausted. These things are as the grammar of our art, or perhaps, more correctly, the language in which architecture expresses her ideas. It is in such matters that we need not be afraid of following precedents. None are so clever that they can afford to neglect the stored experience of the world; and when we occasionally see some nondescript design, and are asked at least to admire its originality, we seem to remember a saying we have heard, that 'fools rush in where angels fear to tread.'

The principles of true originality.

If the modern architect think properly of the purposes for which his buildings are intended, it is scarcely possible that he can be a literal copyist; while, as to the rest, it is better to copy good details than to invent bad ones. The circumstances of each age are so different, that an architecture which really serves its needs can scarcely fail to have a special character stamped upon it. Here is scope for the originality of genius—not originality of this or that detail—not an originality which sets at defiance the hard-won experience of centuries—but an originality of conception, application, and general treatment—the skill which seizes on the knowledge of the past, to apply it to the wants of the present—the conviction that the inmost wants and

aspirations of man are and have been ever the same—that in respect of these 'the thing that hath been, it is that which shall be, and there is no new thing under the sun.'

The realism and freedom of the Renaissance ornament.

We have seen in our past review of architectural history, that, while Gothic art cherished the vertical principle, the Classic architects, and, following them, the Renaissance revivalists, adopted horizontalism as the ruling idea of their designs. But the different characters of the two styles are also strikingly illustrated by their ornamentation.

Here the conflict has been between the natural and the conventional, not so much in the minor architectural details, such as capitals and cornices, as in respect of the application of the higher artistic developments of sculpture and painting. While the Gothic architects inclined to cherish the old eccentricities of detail, the artists of the Renaissance went direct to Nature for inspiration. The old Greek worship of beauty became again with them a passion, and their saints recalled the gods and goddesses of old, by their idealisations of human perfections. To the Mediæval spirit such ideas were abhorrent, a danger to the believer, a snare to all who encouraged them. If sculpture could be admitted to the sanctuary, it must be of a special character, prescribed by conventional religious rules, which ignored, as much as possible, the realistic element. The painter and the sculptor might dwell in an ideal sphere, peopled with saints and martyrs, but a frank reference to actual facts was forbidden to them. They might wander in clerical pastures, guided by ecclesiastical leading-strings, but they must not go beyond. The free air, the open sky, the world in all its wondrous beauty, were not for them; they must not gather from these a spontaneous inspiration; they could not be trusted to look through Nature up to Nature's God.

So far as the Renaissance constituted a protest against such conclusions, we may be sure it will not be reversed. Freedom once tasted is never willingly relinquished, and an artist without freedom is at best a strong man in chains. Our architecture must welcome the best art of its time; and if we expect painters and sculptors to do their best in co-operation with ourselves, we must see that they are afforded free scope for the exercise of their genius.

The determination of style for ourselves.

In determining the style of our architecture, such considerations should have weight. We must inquire not only into its special historical and æsthetic merits, but as to its adaptability to modern requirements, not forgetting its flexibility with reference to the assimilation of the sister arts. The student will find much to reflect upon in such questions. Let him think them out for himself by the light which reason and history afford him; let him bear in mind that he has to work for the present, and not dream only of the past; and especially let him remember that an architect must possess, in addition to good taste, sound judgment and common sense, not only as to the ends he has in view, but also in respect of the choice of a style as the means to such ends.

LECTURE XIII.[1]

THIRD PERIOD OF RENAISSANCE. PALLADIO AND VIGNOLA.

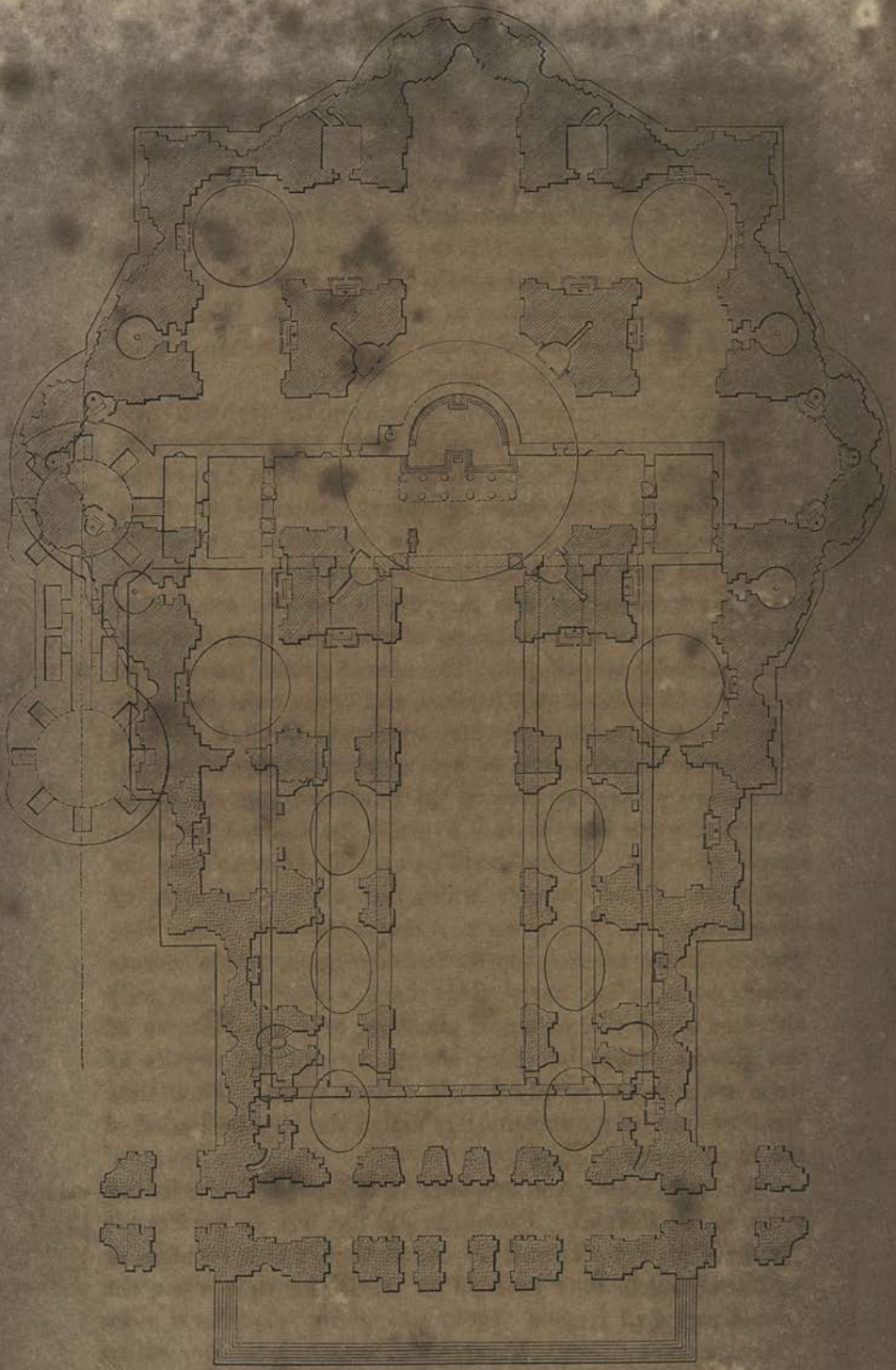
Comparison of the Renaissance with the Gothic Revival.

As in the Gothic Revival of our own day, which claims from us a special attention from the recent loss of its chief leader, so in the older and rival movements, which made the Renaissance triumphant in Italy, and more or less successful elsewhere, we find that causes deeper than mere æstheticism have been at work. It is, or should be, the privilege of the architect to be the exponent of the convictions of his time. In this way, his calling acquires a dignity exceeding that attaching to professions which aim at giving a fleeting pleasure to the sense of beauty only.

The Renaissance was a revolt from Mediævalism. Our recent English Revival was, to a great extent, a return to it. I say, 'to a great extent,' for a complete surrender of modern convictions was impossible; and thus, as far as permanent results are concerned, the movement appears to have dealt chiefly with externals. The Italian school prided itself on referring back to the precedents of an antique and Pagan past. Our own revivalists have turned to the Middle Ages, and have claimed for their favourite types the exclusive denomination of 'Christian architecture.' The Italians turned backwards for artistic freedom, while we have seemed to desire to submit our revived practice more completely to the influence of authority. In both cases precedents have been appealed to, and precision of reproduction applauded.

The Renaissance movement, properly so called, ended with the skilful architects whose works we shall discuss in this lecture. We are therefore able to survey it as a whole, and

[1] Delivered March 6, 1879.



ST. PETER'S.—Plan of existing Building, with Plan of the old Basilican Outline.
From Fergusson's 'History of Architecture.'

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note its successes and defects. Separated as we are from it by lapse of years, a calm discussion is possible of the qualities, which obtained for the Renaissance no inconsiderable part of the suffrages of succeeding generations.

The Gothic revival is too near to us for treatment equally dispassionate. It still exhibits the scene of conflict, and the din of battle appears to be only temporarily hushed. The time for its complete history is not yet come. We cannot confidently prophesy its ultimate results; nor can we be sure that we have seen the last of our revivals.

The first two periods of the Renaissance.

We have already traced the progress of the restored taste for antique architecture in Italy up to the time of Bramante and Sansovino. This has been called the Golden Age of the movement; and if the whole movement be divided into three periods, we shall find it ranking as the second, or middle stage. The first period was Transitional, a time of fusion, when the architecture was subordinated to the decoration. On all sides there were evidences of principles half accepted, or but partially carried out. The second period carried the revival of old forms a step further, and broke more decidedly with Gothic precedents. Its architects studied Roman principles of construction, as well as Roman types of design. The science which had erected the Pantheon and the Baths of Caracalla was now invoked to assist the revived architecture of the day. Brunelleschi's dome at Florence was the first fruit of the process which led to the triumph of Michelangelo at St. Peter's. Bramante and Sansovino applied Roman architecture to modern wants, with a success which, perhaps, has never since been exceeded. Not only did they adopt the columns, pilasters, and entablatures of the Roman orders, but they sought also in the details of their works to resuscitate the old Classic spirit. Their time has therefore been appropriately called the Roman Period of the Renaissance.

The third period—Michelangelo's design for St. Peter's.

We may now pass onwards to notice the concluding phase of the Revival. Bramante did not live to perfect his plans for St. Peter's; and the completion of this great work by Michelangelo may be held to mark the time when the second period of Roman vigour was giving place to a more formal accuracy, and a precision which may be called

pedantic. In the strong hands of Michelangelo, architecture might seem to scorn the restraint which was, however, soon to be imposed. His genius brooked no fetters; and although he declared in favour of Bramante's plans for St. Peter's, he would not suffer them to bind himself. Simplicity of general design, with a colossal largeness of detail, were the principles which suited the impetuous nature of Michelangelo; and they are illustrated by his abandonment of Bramante's plan in favour of a Greek cross, and by the introduction of the huge order, with the consequent exaggeration of subsidiary details, which detracts so greatly from the effect and apparent size of the building as we now see it. The present nave is, as we all know, not a design of the great Florentine; but although it has faults of its own, for which he is not responsible, the scale of the architecture was given by the work of Michelangelo, and the building is to this extent an illustration of his principles of architectural design.

Tendency to architectural pedantry.

It was probably a reaction against an exaggeration, only tolerable when directed by genius, which led to the colder and more tranquil designs of the later Renaissance. Architecture, which, at the revival of letters, had followed scholarship, still felt the same influence. The first burst of enthusiasm had been succeeded by knowledge, and knowledge was now giving rise to a critical pedantry. We have already seen that Alberti adopted even the old language as well as the ancient architecture, and addressed his friends in Latin. Correctness of taste was the aim of the architect, as it was of the poets and authors of the sixteenth century. The first was as anxious to show that his work was accurately in accordance with ancient precedent, as was the latter to demonstrate the purity of the language he used. False quantities were as much condemned in the architecture as in the poetry of the day. From the established canons of taste in architecture, no appeal could be allowed. The instinctive and undisciplined aspirations of the many were to be repressed by the Classical fastidiousness of the cultured few; who, on their part, were bound to be able to produce, when challenged, chapter and verse for their decisions.

New and severer rules now came into play, exuberance

of decorative fancy must be repressed, and the question must always be, not 'What should we like to do?' but 'What did the Romans do, or what would the Romans have done, under similar circumstances?' The problem was—that problem which has ever caused unhappiness and despair in the attempts to solve it—to recall the past—to ignore the present—to bring back the dead to life. Can we wonder if the later Renaissance architects failed at so hopeless a task? We are ourselves sure that architecture should be free from fetters such as these. Nevertheless, we too have our own revivals, and perhaps may even now be told, *De te fabula narratur.*

The school of Palladio.

The application of the spirit pervading society at this time, to architectural design, was chiefly illustrated by the works of Palladio of Vicenza. He gave, indeed, a name to the architecture which he used, and we have not ceased to speak of the Palladian style. Like most popular definitions, however, this term has come to be used with some inaccuracy and much elasticity of meaning. When men say they like or dislike Palladian architecture, they do not generally mean to refer to the architectural forms which Palladio himself actually used, but rather to Italian architecture generally, which has come to be described by a term only applicable in reality to one phase of its development. Palladio's school referred every detail to precedent, and considered that the limits of invention had been reached. They forgot that architecture had ever been progressive, and that the five orders of Classic times could not be permitted an absolute authority over all succeeding ages. Vitruvius had described the edifices of the Augustan age, and his writings were now eagerly studied as a very gospel of architecture. The proportions which he laid down, and the precepts which he inculcated, were to dictate to architects for all time the principles on which alone their art must properly be based.

The Town-hall of Vicenza.

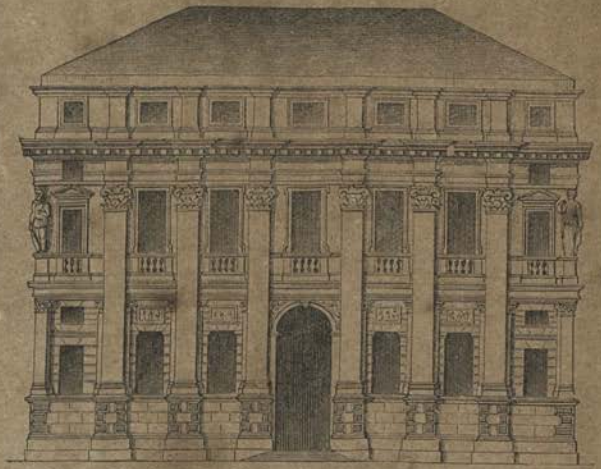
Palladio's principal works are to be found at Vicenza, of which place he was a native. His best design was certainly the arcades of the Town-hall—a building which, notwithstanding admitted defects, has a charming effect of proportion, and of light and shade. Mr. Fergusson speaks of this achievement of Palladio's as being the only instance of a

Gothic edifice having been improved by subsequent additions in a different style of architecture. The Town-hall was one of Palladio's earliest designs, and is less liable to the charge of formality than other and later works.

The Valmarina Palace.

Vignola and Scamozzi are generally ranked with Palladio as members of the same school, and it may be remarked that the pedantry of which it is accused is more to be attributed to their followers than to those distinguished architects themselves. If we find defects as to this matter in the works of Palladio and his comrades, we may remember that, excepting in rare cases, they at least avoided the opposite errors of exaggeration, in which Michelangelo and his followers indulged. One of the exceptions is to be found in the Valmarina Palace by Palladio. Here there is a large order, running through two stories, and supporting nothing. The order is obviously a mere application of what is intended to be ornament, and the elevation would be better without it. The angles, moreover, are the weakest part of the design, whereas they should have been the strongest. In other buildings at Vicenza, by the same architect, there is greater purity of detail, and a general elegance of effect, and it is not often that a gigantic order like that at the Valmarina Palace was indulged in.

A peculiarity of Palladio's designs is found in a weak treatment of the angles. This is especially notable in the example above named, and, in other instances, a single pilaster is placed at the angles, or even a three-quarter column, as at the Barbarano Palace. The effect of such a method is far from satisfactory. In Sansovino's Library of St. Mark, the angles are marked and accentuated by doubling the numbers of the order, so that there is not only a three-quarter column, but also a pilaster, which emphasises the ends of the design. In Palladio's case, there is an order which is obviously placed against a wall, to which there is no necessary termination, and which indeed might be indefinitely continued. While, however, open to such criticisms, Palladio's designs are usually well studied, and the fame which he obtained was chiefly owing to his eye for proportion, while the general distribution of the parts gives a pleasing character to most of his buildings.



VALMARINA PALACE, VICENZA. By PALLADIO.
From Fergusson's 'History of Architecture.'

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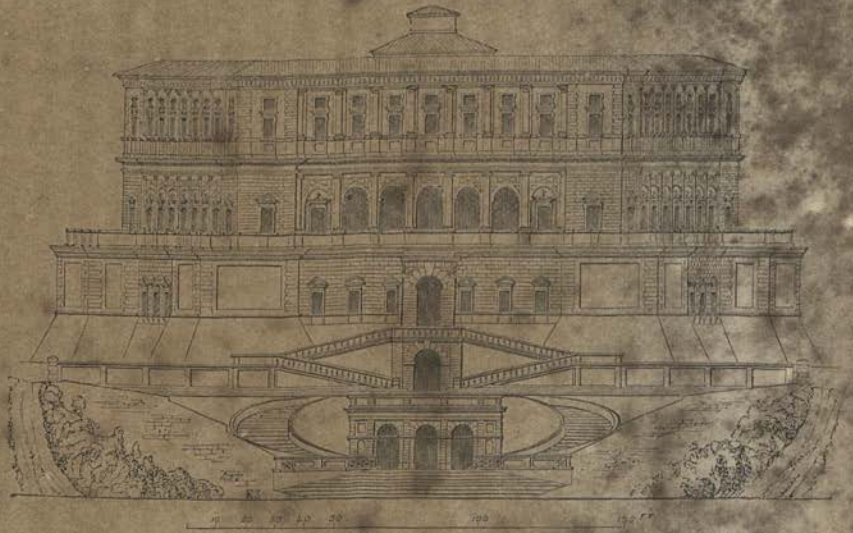

PALACE OF CAPRAROLA, NEAR ROME. By VIGNOLA.
From Fergusson's 'History of Architecture.'

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The aim and the errors of the Palladian school.

Like his contemporary Vignola, Palladio aimed at harmonising Roman ideas with those of his own day; domesticating, so to speak, the antique, while using it for purposes very different from those to which the Romans had applied the forms now adopted. It is scarcely fair to exclaim against this process, as being one of mere copyism; for Palladio's aim, like that of other revivalists, was to make the forms of ancient art his own, and by a process of adaptation evolve out of them a system of design, which should at least aim at some originality of treatment. Bearing in mind that absolute originality in architecture is out of the question, we cannot say that Palladio and his brilliant comrades were wrong, though opinions will of course vary as to the success which they obtained. If they had regarded the arbitrary proportions of the Classic orders with less superstitious reverence, their undoubted talents might have carried the Renaissance to a further and more successful development. This, unfortunately, was not the case, and the rules which were to achieve perfection served to stifle art.

Architecture cannot be satisfied with appeals to the learned only, and must appeal to the unlettered masses as well as to the educated minority. The qualities which will ensure success will not be found in a careful adherence to precedent alone, or in a rigid application of pedantic rules. The buildings of the post-Palladian school possessed these qualities; but they were incapable of exciting enthusiasm, and can at best be regarded as careful academic studies. As time went on, men spurned the fetters which were sought to be imposed upon them, and rushed into the excesses of exaggerated detail which are known by the name of 'Rococo.' Such is always the fate of attempts to strain unduly the rules which bind the human intellect. Men will be free in art, as in the more stirring questions of religion or politics, and repression will generally end in revolution. The Renaissance was nothing if it was not to be progressive; therefore the ultra-Classic formality which now reigned supreme was the herald of decay. The earlier architects showed signs of originality; but after Palladio and his school, all was again a chaos, and further progress appeared to be

abandoned. Why was this? We may perhaps learn from it a truth useful to ourselves, that no selection of a past style of art, and no mere careful reproduction of its details, will ultimately satisfy a society which has little in common with those for whose needs such architecture was originally invented and used.

The Caprarola Palace—a fortified work.

Vignola's greatest work was the noble Palace of Caprarola, near Rome, a building simple in plan, and so treated as to present a castellated, rather than a domestic, aspect. The design is graceful, with a double order, and a well-proportioned arcade to the entrance-front. The weakness of the angles, noticed in Palladio's designs, is here avoided. The plan is a pentagon, with a circular court within, and was evidently controlled by military considerations. Architects in those days were the chief builders of all necessary works, and had not yielded any part of their province to the engineer. In a former lecture reference was made to this subject, with reference to the castles[2] of Mediæval times in France and England, and in the case of Coucy we found, as you may perhaps remember, that, while the architect had constructed the building with such solidity as to be impregnable, he had likewise secured no inconsiderable amount of architectural character and even beauty. The varied outline of such works as Coucy is in itself pleasing, and the donjon keep, the machicolations and galleries, the turrets and gateways, all contributed to the architectural effect. The use of gunpowder brought about a revolution, and now that the whole question has passed into the hands of men of science only, our military structures, no less than our ironclad ships, have become miracles of ugliness.

Union of architectural beauty with engineering strength.

It may be that this result was inevitable, but in some cases, especially those relating to civil works, the question may suggest itself, whether architects have been wise in leaving works which used to be theirs to others. Have they done well to allow one side of their profession to be usurped by the engineer? When the history of this age is written, the latter will claim a distinguished record. He will tell of the scientific application of the powers of nature to the service

[2] See Lecture I. (Second Series), pp. 190–208.

of man, of facilities given to all, of the necessaries of life cheapened, and made available for millions. His works have been devised with a single-minded directness of aim; but the architect may perhaps ask himself why his own co-operation has not been made available. Could not these useful works have had some artistic grace? Can we admit that, in such cases, Truth and Beauty must necessarily be divorced? It may be that we have been dreaming of the Past, while the great living world has been waking, moving, acting. Mankind will thank those who show the way to unite the Necessary with the Artistic, and this should be the duty of the architect. In the meantime, if we ignore these needs, men will turn elsewhere, and will say of the engineers, that they at any rate have known what to do, and how to do it.

In Italy, the importance of engineering was beginning to assert itself during the Renaissance, but architects were still consulted about fortifications. Michelangelo was at one time engaged on the walls of Florence; and at Verona, the gateways designed by San Michele still remain. The latter architect devised here the fortifications of the city, and has been considered the inventor of the pentagonal bastion. This is the form of the building at Caprarola, as to which Vignola evidently followed the rules for fortified places laid down by San Michele. Nevertheless, as he was designing a palace, and not a fortress, he gave to the whole design an architectural character, rather than one exclusively appropriate to military engineering.

The characteristics of Vignola's design.

The building is a fine specimen of Vignola's talents, and, with a few additions, would be a grand architectural monument. The pentagonal form, however, is not agreeable, as the angles determined by it present an awkward appearance. The castellated treatment of the plan is, moreover, not adequately carried out in the external design. The elevation of each side of the pentagon is that of a palace fit to grace the streets of a city like Rome, and in the details the military character is altogether absent. The latter might have been preserved, and the place greatly strengthened, if the angles of the pentagon had been marked by towers, projecting so as to command the flanks. These towers might have been

carried up, so as to break the long and monotonous line of the present roof, and in that case would have had a further practical use, as turrets of observation. If this had been done, and the central circular court covered by a domed roof, the building might have been rendered far more effective architecturally than it is at present. The idea of half fortress, half palace, would have been more thoroughly developed, and the present somewhat insipid formality would have disappeared. With all drawbacks, however, Caprarola must be reckoned a dignified and stately work of architecture, and we may see by this instance, as well as by that of Coucy, that fortified buildings, in the hands of the architect, need not be ugly. Each was fitted to meet the existing circumstances of the time and country. Each was designed on the best military principles, as then understood, and each had a decided and striking architectural character.

Vignola's strict Classicism.

Vignola was, as we may say, more Palladian than Palladio, in his exact reference to ancient rules, as deduced from classical examples. His treatise on the five orders aims at the authority of a text-book, and is still, in that sense, deserving of study. He did not give the proportions of any actually existing details; but, by a principle of selection, he sought perfection, so to speak, 'in the survival of the fittest,' and thought to weld the whole together into one harmonious system. He was invited by Philip II. of Spain to visit that country, in order to superintend the erection of the Escurial, for which many designs had been obtained from various architects. He seems to have compiled from their suggestions a design of his own, which commanded the king's approval. He was unwilling, however, to give up Italy for Spain, and his age and other circumstances induced him to decline the royal invitation, so that his proposals were never carried out.

His work at St. Peter's.

Vignola was then established in Rome, in high favour with the Pope, and on the death of Michelangelo became for a short time the architect of St. Peter's, in which capacity he designed and erected the two lateral cupolas of the building. His works rank on equal terms with those of Palladio, and, indeed, in elegance of detail may be held to surpass them. He disliked extravagance, and referred his art too much to

CHATEAU OF CHAMBORD.—Elevation of Principal Front.
From Fergusson's 'History of Architecture.'

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system and rule; but he applied such rules with a taste and refinement which few have surpassed. He had no inconsiderable talent as a painter, particularly of perspective, and used to say that a study of the latter science had led him to adopt architecture as his profession. His inclination towards the Renaissance was determined, as was that of Brunelleschi, Bramante, and other leaders of the movement, by the study and careful measurement of the remains of Roman art in and about the imperial city.

The French Renaissance—the Château de Chambord.

Vignola visited France, and remained there about two years, which circumstance probably accounts for the tradition that he designed the Château de Chambord. This could scarcely, however, have been the case, as the building was commenced before the time of his visit, and certainly does not accord with his usual principles of design. It is possible that he may have advised the royal builder Francis I. during the progress of the building, and that from its semi-fortified arrangement of plan he may have been influenced in his subsequent designs for Caprarola. The elevation of the latter building, however, has nothing in common with Chambord.

The French architects were working out the Renaissance in a different spirit from that of Vignola and his Italian comrades. They had not the same wealth of ancient buildings of classical architecture to appeal to for precedents, while around them were the evidences of the skill of the Gothic architects of the Middle Ages. In examining the design of Caprarola, I ventured to remark on the monotony of its skyline, and to suggest how it could have been avoided. At Chambord we have the opposite extreme, with a multiplicity of circular and pyramidal roofs, and other details, which is confusing and even bewildering in variety of outline. In this building we have semi-Classic details, combined with a Gothic principle of general composition. It has none of the advantages of position enjoyed by Caprarola, which is seated on a hill surrounded by rocks, and with a natural amphitheatre about it. Chambord, in the midst of a flat and sandy plain, in uninteresting country, owes nothing to nature. Its picturesqueness is the work of the architect alone, and although the critical judgment refuses to be

satisfied with the medley of forms which seem to have been thrown together in wanton exuberance, it is impossible not to feel interested in this most characteristic example of the French Renaissance.

Its picturesqueness of design.

The Château de Chambord recalls, in its curved wings and turrets, the defensive details which we noticed at Coucy as being common in French military architecture. The projecting turrets with conical tops, so often to be met with in the great country houses of France, had become meaningless as a provision for defence; but they were still cherished, not only as an architectural ornament, but as an outward sign of social importance. This is still the case, for to the present day a Frenchman of position thinks his château incomplete without the characteristic *tourelles*, and the *nouveau riche* hastens to add them to the villa of the bourgeois. Apart from such interesting and picturesque relics of military architecture, Chambord and its kindred châteaux offer many suggestions to us in respect of civil architecture, particularly where a certain dignity is required, without sacrifice of domestic comfort. The style is more flexible than that of Palladio or Vignola, and adopting, as it does, the round arch, numerous and ample windows, both arched and square-headed openings, and a horizontal treatment generally, it seems to offer solutions of many difficulties in our modern architecture. No one, on the other hand, can accuse it of tameness or monotony, with its high roofs, dormers, turrets, arcades, and chimneys, such as are to been seen at Chambord or Chenonceaux.

The palace at Fontainebleau.

Although the evidence of the design indisposes us to credit Vignola with much influence upon it, the statement may perhaps be more readily believed in respect of the palace at Fontainebleau. The effect of his counsel here is not indeed very prominent, and it was probably limited by the jealousy of foreigners which existed at the French court and in the nation. The general appearance of the design of Fontainebleau is, however, far more consistent with Vignola's architectural principles than the quasi-Gothic picturesqueness of Chambord, although the details are not to be compared with those to be found in his best works in Italy.

The works of Scamozzi at Venice.

At the time of Vignola's death in 1573, Palladio was nearly at the end of his career; but their traditions were, for a time, upheld by Scamozzi, a young man then rising into fame. He, too, was a native of Vicenza, and devoted himself to architecture, from an admiration of the Palladian school in that city, and of the works of Sansovino at Venice. In accordance with the prevailing fashion, he sought to base the practice of his art on the writings and canons of Vitruvius, and then visited Rome to drink at the great fountain of inspiration of Classic art. Returning to the north, with his mind full of the records of Roman greatness, and his sketch-books crowded with measurements of temples, baths, and theatres, he settled in Venice, and took up the work of Sansovino and others. He continued the design of the Library round the south side of the Piazza of St. Mark, adding a third order, and altering the deep frieze and cornice of Sansovino. These were not improvements, and his work wants dignity and interest. The Cornaro Palace, commenced by Sansovino, is believed to have been finished by Scamozzi.

The employment of rustication—partial and complete.

Like other architects of his time, he also turned his attention to military engineering, and laid out the fortress of Palma, near Friuli. San Michele's work at Verona appears to have determined the type of the architectural details generally adopted for such structures. The latter architect used, as a matter of course, the forms of the Renaissance, and gave them a peculiarity of character by the use of simple rustication. For the massive walls of fortifications such a treatment sufficed, as in such cases delicate mouldings, and other such details, would have been out of place and unnecessary; but for the gateways, the architects of the Renaissance adopted somewhat more elaborate designs. In such structures the orders could be employed, as in other buildings of the time, and an example of their use is to be seen at the Gateway of the Lido, at Venice, as well as in those at Verona. In those gateways, the attached columns and pilasters are apparently built up with rough stones, each forming a course of rustication, while the arches show every voussoir constructed in like manner. The order chosen is the Doric, with the cornice simplified, and the decoration

of the architrave and frieze in some cases omitted. Such works were common in the time we are noticing, and from this cause, probably, arose the fondness of the later Renaissance architects for rustication, which was freely used by the Palladian school. It was employed by them, however, in subordination to the general effect, and therefore in a different manner from that of the older Florentine school, who had based their most characteristic designs, since the days of Brunelleschi, on rustication extending over the whole building, so as to allow little scope for other details. Examples of such a treatment are found in the Pitti, Riccardi, and Strozzi palaces. The latter building is perhaps the most characteristic specimen of the semi-military, semi-domestic architecture of Florence.

Italy was at this period a collection of provinces rather than a single country, and its architecture had therefore many local peculiarities. The sumptuous splendour of the palaces at Venice finds but little counterpart in the austere and stately fortress-like buildings of Florence. The simple details, the bold rustication, the small windows, and the large area of unpierced and solid wall, give a gloomy and almost forbidding aspect to these latter half-fortified dwellings. The Palladian school usually rusticated portions of their buildings only, preferring such parts as seemed to require additional strength, as the ground or basement stories. Vignola did this at Caprarola, and he also carried up rusticated quoins at the angles of the projections of the upper story.

This system of marking the courses has been generally adopted in revived Renaissance architecture in all countries. Wren used it at St. Paul's, and Inigo Jones at Whitehall, and the characteristic Water-gate of the latter in the Savoy is a pleasing specimen of the military type, similar to that adopted by San Michele. The Gothic architects, building with small stones, and relying on constructive forms, did not care to emphasise the various joints, or to maintain regularity of courses; but in Italy, the use in Mediæval times of voussoirs to the arches of different colours, has an effect nearly related to a system of rustication, and a similar method was common in Byzantine and Eastern work.

Its use and abuse.

Of late years it has been customary to condemn rustication, and it is no doubt liable to abuse. It has, however, an appropriateness in many situations, and may be used by an architect so as to give scale to his work, and to modify the monotonous effect of too much plain surface. An example of my meaning may be seen at Bridgewater House, particularly in the part facing the Green Park. The rustication of this front is applied to the ground floor only, over the surface of the wall, and at the angles of the projections above, and we feel, as we see it, that it is both reasonable and effective, and could not have been omitted with advantage. In speaking thus of rustication, I assume, of course, that it represents the jointing of actual masonry, and is that which it appears to be. The exhibition of sham jointing has not been confined to one school or time, for in many old buildings may be seen a sort of rustication, caused by marking out the walls in regular courses, by means of colour. This is very different from the system of the Florentines, or any other method of legitimate rustication.

Close of the Renaissance. General character of the Palladian style.

With Palladio, Vignola, and their followers, we terminate our examination of the architectural Renaissance of Italy. Their works illustrate the third and last period of the movement. The vigorous efforts of the earlier styles, with their elaboration of decorative detail, were over, and in their place men came to substitute a more regulated and formal manner, with much knowledge of precedent and adherence to rules. It has been said that Vignola by his treatise on proportions, and Palladio by his prescription of strict regulations, would have made of architecture an exact science, in which precise knowledge might render success certain. This is, however, very far from being a fair statement of the case, as is proved by the examination of Palladio's own works. It is true that he aimed at precision in his application of the orders; but there is nevertheless much variety in his different designs, and his arcades at the Town-hall of Vicenza, already referred to, are boldly conceived and happily treated. His details were usually refined, and we must allow for the difficulties of the task he attempted to discharge. His palaces at Vicenza, whatever their faults, have served as models to the architects of most civilised countries, and they have survived

the attacks of the most unsparing criticism. We may perhaps realise more fully the merits of Palladio when we contrast his measured and studied compositions with the reckless and bizarre specimens of tricky designs of so-called architecture, which followed in the fantastic reaction of later days.

In Palladio's buildings we find occasionally the mistake of enormous details misapplied, as at the Valmarina Palace; but in other instances an order was used to each story, with details properly subordinated. Propriety of detail and proportion has thus given a fame to Palladio which would not have been gained by the picturesqueness of his designs, or the fertility of his inventive genius. We are, at least, thankful to escape, under his guidance, from the gigantic orders, ill-proportioned mouldings, and broken pediments, which even the great name of Michelangelo cannot justify. We feel that, at least, his architecture is the work of a trained scholar, expert in the use of the materials which a not-to-be-forgotten past had placed in his hands. His style has influenced the revival of Classical architecture thoughout modern Europe, including this country. Wren, Jones, Vanbrugh, with many others, have not neglected Palladian precedents; and Somerset House, by Sir W. Chambers, is just such a building as might have been erected by Palladio or Vignola.

The modern denunciation of the Renaissance.

The use of Classical architecture is still common, although its progress has been checked by the Gothic Revival. The increased knowledge of the history of architecture has brought to the surface a variety of opinion, often fiercely self-assertive. We have heard the architecture evolved from the principles of ancient Greece and Rome denounced as inadmissible, and stigmatised under the name of Pagan, as unfit for the use of Christian men. An active spirit of theological revival has led to the restoration of our churches in the old Gothic styles in which they were erected. In the city which boasts of St. Paul's, Mediæval architecture has been declared the only form of art admissible for the worship of the church. Eloquence of critical disquisition, which has never been surpassed, has occupied itself with declaring the Renaissance an unholy thing; an evil spirit to be exor-

cised; a sin to be purged by a return to the straiter and better ways of Mediævalism. To some among us, the choice of a style might almost seem to be a question of morality rather than of architecture.

Impossibility of absolute revival.

In deciding such a question, it must be remembered that a complete revival cannot but be impossible, whether of the architecture or of the spirit of the past. The world moves onward while we argue, and each generation has its own requirements. An age of Faith is succeeded by an age of Inquiry, to be followed, it may be, by an age of Superstition. A time of freedom presses on the heels of a *régime* of authority. We may copy Greek temples, but we cannot be as the Greeks were, or think their thoughts. Neither can we revive the Mediæval spirit by clothing our architecture in a Gothic garb.

It cannot be admitted by reasonable men that limits are to be placed to the adoption by mankind of the extension of their powers by the increase of knowledge. The employment of machinery, for example, sometimes so fiercely denounced, is but a natural consequence of that use of his intelligence by man which has been implanted in his nature by Divine power. To be for ever protesting against the things of to-day is an easy but a profitless task. The evils before us are always evident, while those which might be caused, or revived, whether by our action or our inactivity, are hidden from our view. There are some critics who think the present always bad; its artists always failures; their own country always wrong. This is not a spirit which is likely to lead to healthy development in architecture.

Plea for liberty and progress in architecture.

If, however, we cannot recall the past, it does not follow that we may not gain by its experience, and thus take a new departure. We may fairly profit by its achievements, and draw precedents from its treasuries. This is one of the reasons why every true architect must respect antiquity, and wish to preserve our ancient monuments; and as we know, in these days, all that others have done in ancient times, we have naturally the responsibility of choice of style placed upon us. It is not, therefore, reasonable that we should be forced to select one type, and use it for all purposes, merely because our predecessors did so, in ignorance of any other.

Still less can it be fairly contended that we are not at liberty to avail ourselves of successive phases of the same style, because the history of our art shows that such a course is inconsistent with chronological accuracy. It is not the business of the modern architect to erect buildings which may deceive his successors as to the date of their execution. This would be to aim at architectural forgery, while our duty is to do our part, in our own day, in the same spirit as that in which our predecessors worked in theirs.

The superiority for us of Gothic in ecclesiastical architecture.

We may, therefore, claim the liberty to select different architectural types for different things: thus, to some of us, the Gothic styles may appear better suited for churches and sacred buildings and the Italian more appropriate to secular work.

The first of these decisions has already been accepted, for the present at least, in this country, and Gothic architecture has been practically adopted for church building. It is natural that this should be so. The charm of our own Mediæval buildings, and the hallowing associations which cling to them, are enough to justify such a choice, if justification be needed. This is not only, or chiefly, a question of architecture. We do not want to break with tradition in our ecclesiastical buildings; we prize the continuity of our religion; we like to think that we are worshipping, as our fathers did, in so far as the external forms of our churches are concerned.

In our venerable cathedrals, we wish for no change, we ask for no novelties. As we commune with past centuries, we find ourselves confronted with the old, old realities of human life. Here, at any rate, the weary are glad to rest: let others agitate for change and newness; for us the Old is better. The most advanced science can here do nothing for us; new discoveries, whether philosophical or architectural, have no bearing on the momentous questions which bring worshippers to the churches. There has come to us no modern solution of the mysteries of life and death, the origin of evil, the eternal conflict between right and wrong. Our old churches are thus precious to us for what they are. They stand out as beacons on the shore of time, which, in the public interest, must not be either removed or tampered

with. The preservation of such buildings is, therefore, our bounden duty, and now that Gothic principles have become well understood, there can be no doubt that every architectural student should qualify himself for the important responsibilities that will be laid upon him in practice.

Copyism even here to be deprecated.

Palladio and Vignola did not take more pains to study and follow ancient precedents, than Sir Gilbert Scott and the pioneers of the English Gothic revival. The conflicts of taste waged over the five orders have found a modern parallel in the discussions we have heard of Norman, Early English, Decorated, and Perpendicular Gothic, and in the ecclesiological wrangles of our day on the religious symbolism of First, Second, or Third Pointed.

In the first stages of a revival, accuracy is difficult of attainment, and so it happens that to be able to copy well is a distinction. It is only afterwards that more is asked for, and that an originality is required in the use of accepted details. The young architect in an old country like our own has great advantages over those in more modern lands, such as America and our colonies. He has his precedents at his door, and can more readily imbibe the spirit of the past. It is well that he should do so, provided he remembers that modern society has its own claims, which must not be set aside in favour of antiquarian lore. A system of merely retrospective design easily becomes archæology instead of architecture—a science rather than an art. Architects having the courage of their convictions should strive to lead the public taste from bizarre oddities to sterling merit of design, to think of present excellence and future progress, as well as of the triumphs of the past.

The value of the Classical style for secular architecture.

While recognising the existing preference for Mediæval architecture for ecclesiastical works, and conceding that in Gothic churches a certain amount of actual copying may be defended, it cannot be allowed that the Classical style must of necessity be neglected. The Palladian school of architects had a definite intention, which was to design a modern style, that should be based upon the architecture of the Romans. Whatever merit may be assigned to their works, they certainly produced buildings unlike any that had previously existed. They copied, or intended to copy, literally, the

details of the orders; but neither Palladio's arcades nor Sansovino's palaces are direct reproductions of actual buildings. They, at least, succeeded in applying ancient art to modern use, in a manner which has been imitated ever since.

We have had, in this country, many tastes, and various revivals; but through them all, the Palladian or Italian manner of Wren and Inigo Jones has held its ground, and something of a reaction towards it has lately appeared in unexpected quarters.

Civic. In most European capitals the chief public buildings, as well as almost the whole of the private houses, are in this style, however divided may be our allegiance at home. If we have erected Mediæval Houses of Parliament, the French have shown us in their Hôtel de Ville of Paris, now unfortunately destroyed, how convenient and magnificent a civic building may be designed after a Classic manner. The application of the highest class of painting and of the best sculpture is natural and welcome in the case of Classical architecture, the Renaissance of which was fostered and directed by painters and sculptors. If it be said that such architecture is unsuited to our climate, it may be pointed out that it has been generally adopted in climates not much unlike our own, and those who have lived in one of the solid houses of simple outline which the architects of the English Renaissance have left to us, would not always care to change to the so-called picturesque creations of Modern Gothic, with their voluntary carelessness of plan, and the maximum of surface of external walls and roofs.

Domestic. In modern domestic work we must often welcome novelties, which we do not desire to see in our churches. We may, in the latter case, be content to rest satisfied with piers which are obstructive, and arches of unnecessarily contracted span; but in secular buildings convenience must rule, and science be invoked to aid us to overcome difficulties and economise space. It is not wise of the architect to leave such matters to the engineer. He must use his art intelligently, being ever ready to adapt it to all reasonable requirements; and the Renaissance, as a modern style, will apparently have less difficulty in accepting this position than the more stern and stiffer types of Mediæval art.

The value of the dome.

For grand architectural effect, moreover, and for the convenience of a spacious interior, Classic architecture possesses the dome, if not absolutely, at least more fully, than any other style. Those among us who are accustomed to visit St. Paul's, cannot even accept unreservedly the popular doctrine that all our churches must of necessity be Gothic. We require in modern days, and for Protestant services, wide areas more than 'long-drawn aisles,' and in few other English buildings can anything be seen grander than the effect of St. Paul's during the services of the church, with its congregation of thousands filling the vast area under the dome, and hanging on the words of the preacher, in the dim twilight of a winter afternoon.

The Renaissance movement not exhausted.

A calm review of the history of the Renaissance, and of the circumstances which led to it, leads us to the conclusion that the movement is not yet over. The Classical tastes, which gave to it the first impulse, still exist among us, and are likely to continue. An architecture which can give us solidity and magnificence; which can adapt itself to purposes of utility, and assimilate progressive scientific construction; which unites elegance of proportion with refinement of detail; and which welcomes the best efforts of the painter and the sculptor in a loving combination of art, cannot be easily banished from the modern practice of the civilised world.

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